

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE  
STATE OF CALIFORNIA**

In the Matter of the Application of SOUTHERN )	
CALIFORNIA EDISON COMPANY (U 338-E) )	A.13-08-XXX
for a Certificate of Public Convenience and )	
Necessity for the Coolwater-Lugo Transmission )	
Project )	

---

**PROPONENT'S ENVIRONMENTAL ASSESSMENT**

**COOLWATER-LUGO TRANSMISSION PROJECT**

**Volume 4 of 7**

<p>This PEA is being filed separately from the application and is being submitted as an archival DVD and CD ROM</p>
---

BETH GAYLORD  
TAMMY JONES  
ANGELA M. WHATLEY

Attorneys for  
SOUTHERN CALIFORNIA EDISON COMPANY

2244 Walnut Grove Avenue  
Post Office Box 800  
Rosemead, California 91770  
Telephone: (626) 302-6634  
Facsimile: (626) 302-1926  
E-mail:tammy.jones@sce.com

## **Appendix C**

### **Air Emissions Calculations**

## **Uncontrolled Proposed Project Emissions**

**Table 1**  
**Annual Construction Emissions Summary**

**Maximum Annual Construction Emissions by Component<sup>a</sup>**

<b>Component</b>	<b>VOC (tons/year)</b>	<b>CO (tons/year)</b>	<b>NOX (tons/year)</b>	<b>SOX (tons/year)</b>	<b>PM10 (tons/year)</b>	<b>PM2.5 (tons/year)</b>	<b>CO2e (tons/year)</b>
Substation	1.65	7.73	20.18	0.04	569.13	158.79	4,038.46
Distribution for Station Light & Power	0.02	0.07	0.13	0.00	0.13	0.02	32.88
Modifications to Existing Substations	0.57	3.50	4.08	0.01	0.81	0.33	894.34
Transmission and Subtransmission Lines	13.68	52.12	93.35	7.77	958.85	203.05	20,788.65
Telecommunications System	0.15	0.85	1.56	0.00	1.80	0.25	353.20
<b>Total</b>	<b>16.06</b>	<b>64.26</b>	<b>119.29</b>	<b>7.83</b>	<b>1,530.72</b>	<b>362.43</b>	<b>26,107.52</b>

<sup>a</sup> Maximum annual emissions are during months 1 through 12

**Table 2  
Operational Emissions**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Emergency Generator Testing	0.40	4.34	7.61	0.01	0.25	0.25	706.90
SF <sub>6</sub> Leakage	--	--	--	--	--	--	1,229.70
Motor Vehicle Exhaust	0.02	0.13	0.39	0.00	0.05	0.02	263.24
Motor Vehicle Fugitive PM	--	--	--	--	94.49	9.58	
<b>Total</b>	<b>0.42</b>	<b>4.47</b>	<b>8.00</b>	<b>0.01</b>	<b>94.79</b>	<b>9.85</b>	<b>2,199.84</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Emergency Generator Testing	0.01	0.11	0.20	0.00	0.01	0.01	18.38
SF <sub>6</sub> Leakage	--	--	--	--	--	--	224.42
Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	1.25
Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.01	--
<b>Total</b>	<b>0.01</b>	<b>0.11</b>	<b>0.20</b>	<b>0.00</b>	<b>0.10</b>	<b>0.02</b>	<b>244.05</b>

**Emergency Generator Testing Emissions**

Horsepower	Hours/Day	Fuel Use (gal/hr)	Emission Factors (g/bhp-hr) <sup>a</sup>					Emission Factors (g/gal)		
			CO	VOC <sup>b</sup>	NOx <sup>b</sup>	PM10 <sup>c</sup>	PM2.5 <sup>c</sup>	CO <sub>2</sub> <sup>d</sup>	CH <sub>4</sub> <sup>e</sup>	N <sub>2</sub> O <sup>e</sup>
757	1	31.3	2.6	0.24	4.56	0.15	0.15	10,210	0.41	0.083

<sup>a</sup> Emission factors assumed the same as emission limits for emergency CI engine in Title 17, CCR, Section 93115.6 Table 2

<sup>b</sup> For NMHC+NOx limit, emissions assumed to be 5 percent ROC

and 95 percent NOx, from Table D-25 of 2011 Carl Moyer Program Guidelines - <http://www.arb.ca.gov/msprog/moyer/guidelines/current.htm>

<sup>c</sup> PM10 and PM2.5 assumed to be same as PM emission standards.

<sup>d</sup> From Table C-1 of Title 40, Code of Federal Regulations, Subpart 98 for No. 2 distillate fuel oil.

<sup>e</sup> From Table C-2 of Title 40, Code of Federal Regulations, Subpart 98 for No. 2 distillate fuel oil.

Load Factor	Emission Rates (lb/hr)								
	CO <sup>a</sup>	VOC <sup>a</sup>	NOx <sup>a</sup>	SOx <sup>b</sup>	PM10 <sup>a</sup>	PM2.5 <sup>a</sup>	CO <sub>2</sub> <sup>c</sup>	CH <sub>4</sub> <sup>c</sup>	N <sub>2</sub> O <sup>c</sup>
1	4.34	0.40	7.61	0.007	0.25	0.25	704.53	0.03	0.01

Diesel Fuel Density = 6.943 lb/gal

Diesel Fuel Sulfur = 15 ppmw

<sup>a</sup> Emission Rate [lb/hr] = Emission Factor [g/bhp-hr] x Engine Horsepower [hp] x Load Factor [unitless] / 453.6 [g/lb]

<sup>b</sup> Emission Rate [lb/hr] = Fuel Use [gal/hr] x Fuel Density [lb/gal] x Fuel Sulfur [ppmw] x 10<sup>-6</sup> x 2 [lb SO<sub>2</sub>/lb S]

<sup>c</sup> Emission Rate [lb/hr] = Emission Factor [g/gal] x Fuel Use [gal/hr] / 453.6 [g/lb]

Daily Emissions (lb/day) <sup>a</sup>									
CO	VOC	NOx	SOx	PM10	PM2.5	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e <sup>b</sup>
4.34	0.40	7.61	0.01	0.25	0.25	704.53	0.03	0.01	706.90

**Table 2  
Operational Emissions**

<sup>a</sup> Daily Emissions [lb/day] = Hourly Emissions [lb/hr-unit] x Operating Time [hr/day]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

Op. (hr/year)	Annual Emissions (tons) <sup>a</sup>									
	CO	VOC	NOx	SOx	PM10	PM2.5	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
52	0.11	0.01	0.20	0.00	0.01	0.01	18.32	0.00	0.00	18.38

<sup>a</sup> Annual Emissions [tons] = Hourly Emissions [lb/hr] x Operating Time [hr/year]

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
1-Ton Crew Cab, 4x4, Substation	1	48	N/A	60
1-Ton Crew Cab, 4x4, Transmission	1	2	N/A	127.4
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	1	1	N/A	71
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	1	N/A	89

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO <sub>2</sub> (lb/mi) <sup>a</sup>	CH <sub>4</sub> (lb/mi) <sup>a</sup>	N <sub>2</sub> O (lb/mi) <sup>a</sup>
1-Ton Crew Cab, 4x4, Substation	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab, 4x4, Transmission	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab, 4x4, Gale-Pisgah	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO <sub>2</sub> (lb/day) <sup>a</sup>	CH <sub>4</sub> (lb/day) <sup>a</sup>	N <sub>2</sub> O (lb/day) <sup>a</sup>	CO <sub>2</sub> e (lb/day) <sup>b</sup>
1-Ton Crew Cab, 4x4, Substation	0.00	0.02	0.07	0.00	0.01	0.00	44.93	0.00	0.00	45.46
1-Ton Crew Cab, 4x4, Transmission	0.01	0.05	0.14	0.00	0.02	0.01	95.40	0.00	0.00	96.54
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	0.00	0.03	0.08	0.00	0.01	0.00	53.17	0.00	0.00	53.80
1-Ton Crew Cab, 4x4, Gale-Pisgah	0.01	0.03	0.10	0.00	0.01	0.00	66.65	0.00	0.00	67.44
<b>Total</b>	<b>0.02</b>	<b>0.13</b>	<b>0.39</b>	<b>0.00</b>	<b>0.05</b>	<b>0.02</b>	<b>260.15</b>	<b>0.00</b>	<b>0.01</b>	<b>263.24</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
1-Ton Crew Cab, 4x4, Substation	0.00	0.00	0.00	0.00	0.00	0.00	1.08	0.00	0.00	1.09
1-Ton Crew Cab, 4x4, Transmission	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.10
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03

**Table 2  
Operational Emissions**

1-Ton Crew Cab, 4x4, Gale-Pisgah	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.23</b>	<b>0.00</b>	<b>0.00</b>	<b>1.25</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
1-Ton Crew Cab, 4x4, Substation	1	Unpaved	0	48	1.311	0.131	0.00	0.00	0.00	0.00
1-Ton Crew Cab, 4x4, Substation	1	Paved	60	48	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Crew Cab, 4x4, Transmission	1	Unpaved	67.4	2	1.311	0.131	88.33	8.83	0.09	0.01
1-Ton Crew Cab, 4x4, Transmission	1	Paved	60	2	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	1	Unpaved	4	1	1.311	0.131	5.24	0.52	0.00	0.00
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	1	Paved	67	1	0.003	0.001	0.22	0.05	0.00	0.00
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	Unpaved	0	1	1.311	0.131	0.00	0.00	0.00	0.00
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	Paved	89	1	0.003	0.001	0.30	0.07	0.00	0.00
<b>Total</b>							<b>94.49</b>	<b>9.58</b>	<b>0.10</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**SF<sub>6</sub> Leakage Greenhouse Gas Emissions**

Item	Value	Units
Total SF <sub>6</sub>	3,756	pounds
SF <sub>6</sub> Leakage Rate	0.5	%/year
SF <sub>6</sub> Emissions	18.78	pounds
SF <sub>6</sub> Global Warming Potential <sup>a</sup>	23,900	
<b>CO<sub>2</sub>e Emissions<sup>b</sup></b>	<b>1,230</b>	<b>lbs/day</b>
<b>CO<sub>2</sub>e Emissions<sup>b</sup></b>	<b>224</b>	<b>tpy</b>

<sup>a</sup> From Table A-1 of Title 40, Code of Federal Regulations, Subpart 98

<sup>b</sup> CO<sub>2</sub>e emissions [tpy] = SF<sub>6</sub> emissions [lb] x

Global warming potential [lb CO<sub>2</sub>e/lb SF<sub>6</sub>] / 2000 [lb/ton]

**Table 3  
Total Construction Emissions Summary**

**Total Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>										
Survey	0.00	0.00	0.00	0.00	0.07	0.01	0.68	1.00	0.00	0.00
Grading	1.16	4.78	12.23	0.02	534.60	154.96	2,203.85	1.00	0.00	0.00
Perimeter Wall	0.10	0.59	0.79	0.00	1.15	0.15	273.61	1.00	0.00	0.00
Water Well	0.02	0.16	0.14	0.00	0.54	0.06	70.96	1.00	0.00	0.00
Civil	0.18	1.13	4.69	0.01	25.40	2.76	1,026.29	1.00	0.00	0.00
Electrical	0.05	0.29	0.34	0.00	0.31	0.06	61.27	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.16	0.02	7.43	1.00	0.00	0.00
MEER	0.01	0.11	0.04	0.00	0.34	0.04	18.75	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.09	0.01	3.32	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.07	0.01	5.75	1.00	0.00	0.00
Asphalting	0.13	0.55	1.93	0.00	6.39	0.72	366.55	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>										
Survey	0.00	0.02	0.00	0.00	0.23	0.02	2.28	0.00	1.00	0.00
Civil	0.81	4.62	6.13	0.02	9.73	1.29	1,942.48	0.00	1.00	0.00
Electrical	0.19	1.41	1.36	0.00	1.09	0.22	246.08	0.00	0.67	0.67
Wiring	0.00	0.09	0.01	0.00	0.23	0.03	13.18	0.00	0.67	0.67
Control Room	0.01	0.14	0.06	0.00	0.35	0.05	24.75	0.00	0.67	0.67
Maintenance	0.00	0.06	0.01	0.00	0.24	0.03	8.29	0.00	0.67	0.67
Asphalting	0.10	0.41	1.11	0.00	2.19	0.26	188.30	0.00	0.00	1.00
Transformer Assembly	0.11	0.56	0.83	0.00	0.40	0.08	137.54	0.00	0.67	0.67
Testing	0.00	0.10	0.01	0.00	0.19	0.03	14.79	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>										
Overhead Construction	0.00	0.03	0.04	0.00	0.05	0.01	13.31	1.00	0.00	0.00
Underground Civil Construction	0.01	0.03	0.05	0.00	0.05	0.01	11.87	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.04	0.01	7.70	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	1.00	0.00	0.00
Civil	0.11	0.65	0.78	0.00	0.10	0.05	184.00	1.00	0.00	0.00
Electrical	0.06	0.34	0.50	0.00	0.08	0.04	84.18	1.00	0.00	0.00
Wiring	0.00	0.02	0.00	0.00	0.01	0.00	2.49	1.00	0.00	0.00
MEER	0.01	0.06	0.04	0.00	0.03	0.01	12.10	1.00	0.00	0.00



**Table 3**  
**Total Construction Emissions Summary**

**Total Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	1.00	0.00	0.00
Civil	0.20	1.17	1.37	0.00	0.19	0.09	342.12	1.00	0.00	0.00
Electrical	0.09	0.52	0.71	0.00	0.13	0.06	124.34	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.04	0.01	7.40	1.00	0.00	0.00
Control Room	0.01	0.07	0.05	0.00	0.03	0.01	14.83	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	1.00	0.00	0.00
Transformer Assembly	0.08	0.48	0.60	0.00	0.10	0.04	103.59	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>										
Survey	0.01	0.16	0.02	0.00	4.54	0.46	22.68	1.00	0.00	0.00
Construction and Materials Yards	3.60	16.40	31.77	0.07	5.19	1.93	6,520.20	0.40	0.40	0.40
Right-of-Way Clearing	0.43	1.69	3.34	0.01	179.96	57.20	663.30	1.00	0.00	0.00
Roads and Landing Work	0.99	3.85	7.73	0.02	308.53	95.31	1,537.43	1.00	0.00	0.00
Retaining Wall Installation	0.64	3.27	5.57	0.01	47.52	4.96	1,242.25	1.00	0.00	0.00
Wet Crossing Installation	0.63	3.24	5.62	0.01	51.20	5.34	1,131.31	1.00	0.00	0.00
Guard Structure Installation	0.26	1.32	2.17	0.01	20.37	2.12	549.64	0.40	0.40	0.40
Remove Existing Conductor & GW	0.82	3.93	8.70	0.02	69.01	7.19	1,866.29	0.40	0.40	0.40
Shoo-fly Pole Haul	0.01	0.03	0.05	0.00	0.58	0.06	9.45	0.40	0.40	0.40
Install Shoo-fly Pole	0.03	0.18	0.28	0.00	1.69	0.18	62.47	0.40	0.40	0.40
Shoo-fly Pole Assembly	0.01	0.05	0.06	0.00	1.12	0.12	12.24	0.40	0.40	0.40
LST Removal	0.75	3.27	5.74	0.01	23.44	2.61	965.89	0.40	0.40	0.40
LST Foundation Removal	0.18	0.88	1.30	0.00	4.77	0.54	305.44	0.40	0.40	0.40
Install LST Foundations	1.50	7.00	14.24	0.37	234.68	24.08	3,847.35	0.40	0.40	0.40
LST Steel Haul	0.68	1.57	4.53	1.46	20.76	2.22	1,153.35	0.40	0.40	0.40
LST Steel Assembly	4.81	19.86	34.12	5.30	74.80	9.03	7,123.61	0.40	0.40	0.40
LST Erection	7.33	16.00	32.95	9.49	99.77	11.15	7,429.85	0.40	0.40	0.40
Install TSP Foundations	1.12	5.35	10.27	0.03	156.47	16.03	2,694.49	0.40	0.40	0.40
TSP Haul	0.05	0.22	0.42	0.00	7.74	0.79	82.65	0.40	0.40	0.40
TSP Assembly	0.09	0.49	0.73	0.00	9.14	0.95	137.31	0.40	0.40	0.40

**Table 3  
Total Construction Emissions Summary**

**Total Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
TSP Erection	0.09	0.49	0.70	0.00	6.53	0.69	130.79	0.40	0.40	0.40
Install/Transfer Conductor	5.48	19.51	23.94	2.55	105.70	11.90	6,428.40	0.40	0.40	0.40
Shoo-fly Pole Removal	0.01	0.05	0.11	0.00	0.89	0.09	21.16	0.40	0.40	0.40
Remove Shoo-fly Conductor & GW	0.05	0.25	0.57	0.00	5.39	0.56	118.12	0.40	0.40	0.40
Guard Structure Removal	0.28	1.39	2.33	0.00	25.85	2.69	420.43	0.40	0.40	0.40
115 kV Pole Removal	0.02	0.09	0.19	0.00	1.46	0.15	35.15	0.40	0.40	0.40
Install TSP Riser Foundations	0.08	0.42	0.82	0.00	16.28	1.66	212.32	0.40	0.40	0.40
TSP Riser Haul	0.00	0.02	0.04	0.00	0.77	0.08	8.27	0.40	0.40	0.40
TSP Riser Assembly	0.00	0.02	0.04	0.00	0.77	0.08	8.27	0.40	0.40	0.40
TSP Riser Erection	0.05	0.27	0.39	0.00	3.63	0.38	72.66	0.40	0.40	0.40
Vault Installation	0.04	0.23	0.34	0.00	6.23	0.64	71.30	0.40	0.40	0.40
Duct Bank Installation	0.02	0.15	0.18	0.00	7.19	0.73	39.99	0.40	0.40	0.40
Install Underground Cable	0.06	0.30	0.69	0.00	7.54	0.78	152.12	0.40	0.40	0.40
Restoration	0.18	1.24	1.24	0.00	93.73	29.01	207.60	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 1)</b>										
Install Cable	0.02	0.12	0.27	0.00	0.37	0.05	55.61	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	1.00	0.00	0.00
Ungerground Conduit and Structures	0.00	0.02	0.04	0.00	0.17	0.02	10.32	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>										
Install Cable	0.01	0.06	0.14	0.00	0.19	0.02	27.80	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.00	0.00	1.00
Ungerground Conduit and Structures	0.00	0.02	0.03	0.00	0.11	0.01	6.56	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>										
Install Cable	0.02	0.10	0.23	0.00	0.16	0.02	46.14	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.00	0.00	1.00
Ungerground Conduit and Structures	0.00	0.02	0.04	0.00	0.09	0.01	10.26	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>										
Install Cable	0.03	0.14	0.29	0.00	0.17	0.03	60.35	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.33	0.00	0.00	1.00
Ungerground Conduit and Structures	0.01	0.03	0.05	0.00	0.09	0.01	13.10	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>										
Install Cable	0.02	0.09	0.18	0.00	0.11	0.02	37.72	0.00	0.00	1.00

**Table 3  
Total Construction Emissions Summary**

**Total Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.33	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.08	0.01	11.63	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>										
Install 5 Foot Crossarm	0.01	0.07	0.12	0.00	0.33	0.04	27.70	1.00	0.00	0.00
Install Down Guys	0.00	0.02	0.02	0.00	0.06	0.01	4.93	1.00	0.00	0.00
Install Cable	0.03	0.14	0.32	0.00	0.43	0.05	64.46	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.05	0.00	0.72	1.00	0.00	0.00
Underground Conduit from Pole to Pole	0.00	0.02	0.03	0.00	0.11	0.01	8.57	1.00	0.00	0.00
Restoration	0.00	0.01	0.00	0.00	0.12	0.01	2.02	1.00	0.00	0.00
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>										
Install 5 Foot Crossarm	0.02	0.09	0.19	0.00	0.02	0.01	39.90	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.09	0.17	0.00	0.02	0.01	41.02	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.01	0.00	3.93	1.00	0.00	0.00
Install Cable	0.01	0.08	0.17	0.00	0.02	0.01	36.10	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.02	0.00	0.00	0.02	0.00	3.53	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.06	0.09	0.00	0.03	0.01	22.55	1.00	0.00	0.00
Restoration	0.00	0.02	0.01	0.00	0.01	0.00	3.69	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>										
All	0.01	0.08	0.09	0.00	0.02	0.01	27.81	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>										
Months 1-12	16.06	64.26	119.29	7.83	1,530.72	362.43	26,107.52			
Months 13-24	12.12	46.95	79.56	7.75	441.53	60.82	18,573.43			
Months 19-30	11.50	43.22	75.54	7.73	434.82	59.91	17,031.90			
<b>12-Month Maximum</b>	<b>16.06</b>	<b>64.26</b>	<b>119.29</b>	<b>7.83</b>	<b>1,530.72</b>	<b>362.43</b>	<b>26,107.52</b>			
<b>Total GHG Emissions (metric tons)</b>							<b>48,440.17</b>			

**Table 4**  
**Total Off-Road Construction Equipment Emissions Summary**

**Total Off-Road Construction Equipment Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Grading	1.06	3.88	8.46	0.01	0.32	0.30	1,360.58	1.00	0.00	0.00
Perimeter Wall	0.09	0.47	0.63	0.00	0.02	0.02	228.32	1.00	0.00	0.00
Water Well	0.02	0.11	0.12	0.00	0.00	0.00	62.74	1.00	0.00	0.00
Civil	0.06	0.33	0.43	0.00	0.02	0.02	97.48	1.00	0.00	0.00
Electrical	0.04	0.19	0.33	0.00	0.02	0.02	46.84	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Asphalting	0.09	0.32	0.76	0.00	0.03	0.03	109.57	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
Civil	0.77	4.00	5.00	0.02	0.22	0.20	1,647.56	0.00	1.00	0.00
Electrical	0.18	0.94	1.31	0.00	0.08	0.08	180.29	0.00	0.67	0.67
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	0.00	0.67	0.67
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67
Asphalting	0.09	0.32	0.76	0.00	0.03	0.03	109.57	0.00	0.00	1.00
Transformer Assembly	0.10	0.45	0.82	0.00	0.04	0.03	122.66	0.00	0.67	0.67
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>										
Overhead Construction	0.00	0.02	0.04	0.00	0.00	0.00	12.68	1.00	0.00	0.00
Underground Civil Construction	0.01	0.02	0.04	0.00	0.00	0.00	10.39	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.00	0.00	7.27	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Civil	0.11	0.57	0.73	0.00	0.04	0.04	163.64	1.00	0.00	0.00
Electrical	0.06	0.26	0.49	0.00	0.02	0.02	72.67	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	1.00	0.00	0.00

**Table 4**  
**Total Off-Road Construction Equipment Emissions Summary**

**Total Off-Road Construction Equipment Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Civil	0.19	1.01	1.27	0.00	0.07	0.06	304.10	1.00	0.00	0.00
Electrical	0.09	0.38	0.70	0.00	0.03	0.03	103.81	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Transformer Assembly	0.08	0.37	0.59	0.00	0.03	0.03	88.72	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Construction and Materials Yards	3.31	10.95	25.97	0.05	0.92	0.84	4,736.74	0.40	0.40	0.40
Right-of-Way Clearing	0.42	1.50	3.22	0.01	0.12	0.11	617.85	1.00	0.00	0.00
Roads and Landing Work	0.97	3.38	7.50	0.01	0.27	0.25	1,436.65	1.00	0.00	0.00
Retaining Wall Installation	0.61	2.73	4.65	0.01	0.18	0.16	997.93	1.00	0.00	0.00
Wet Crossing Installation	0.59	2.57	4.55	0.01	0.17	0.16	841.55	1.00	0.00	0.00
Guard Structure Installation	0.25	1.10	1.97	0.00	0.08	0.07	483.08	0.40	0.40	0.40
Remove Existing Conductor & GW	0.78	3.18	7.99	0.02	0.25	0.23	1,627.74	0.40	0.40	0.40
Shoo-fly Pole Haul	0.01	0.02	0.04	0.00	0.00	0.00	7.27	0.40	0.40	0.40
Install Shoo-fly Pole	0.03	0.15	0.26	0.00	0.01	0.01	55.01	0.40	0.40	0.40
Shoo-fly Pole Assembly	0.01	0.02	0.04	0.00	0.00	0.00	6.95	0.40	0.40	0.40
LST Removal	0.73	2.80	5.51	0.01	0.27	0.25	860.65	0.40	0.40	0.40
LST Foundation Removal	0.17	0.64	1.23	0.00	0.05	0.05	263.68	0.40	0.40	0.40
Install LST Foundations	1.25	5.10	9.09	0.03	0.30	0.28	2,580.73	0.40	0.40	0.40
LST Steel Haul	0.19	0.63	1.62	0.00	0.05	0.05	311.11	0.40	0.40	0.40
LST Steel Assembly	3.08	13.89	23.24	0.04	1.12	1.03	3,738.95	0.40	0.40	0.40
LST Erection	1.46	5.29	11.52	0.02	0.51	0.47	1,824.50	0.40	0.40	0.40
Install TSP Foundations	1.02	4.00	7.49	0.02	0.25	0.23	1,988.88	0.40	0.40	0.40
TSP Haul	0.04	0.14	0.34	0.00	0.01	0.01	58.12	0.40	0.40	0.40
TSP Assembly	0.09	0.34	0.67	0.00	0.03	0.03	105.03	0.40	0.40	0.40

**Table 4**  
**Total Off-Road Construction Equipment Emissions Summary**

**Total Off-Road Construction Equipment Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
TSP Erection	0.09	0.34	0.67	0.00	0.03	0.03	105.03	0.40	0.40	0.40
Install/Transfer Conductor	2.23	8.36	19.92	0.04	0.67	0.62	3,894.68	0.40	0.40	0.40
Shoo-fly Pole Removal	0.01	0.05	0.10	0.00	0.00	0.00	18.51	0.40	0.40	0.40
Remove Shoo-fly Conductor & GW	0.05	0.20	0.51	0.00	0.02	0.01	100.47	0.40	0.40	0.40
Guard Structure Removal	0.27	1.09	2.19	0.00	0.10	0.09	355.29	0.40	0.40	0.40
115 kV Pole Removal	0.02	0.08	0.17	0.00	0.01	0.01	30.66	0.40	0.40	0.40
Install TSP Riser Foundations	0.07	0.26	0.49	0.00	0.02	0.02	129.98	0.40	0.40	0.40
TSP Riser Haul	0.00	0.01	0.03	0.00	0.00	0.00	5.81	0.40	0.40	0.40
TSP Riser Assembly	0.00	0.01	0.03	0.00	0.00	0.00	5.81	0.40	0.40	0.40
TSP Riser Erection	0.05	0.19	0.37	0.00	0.02	0.02	58.35	0.40	0.40	0.40
Vault Installation	0.03	0.17	0.26	0.00	0.01	0.01	48.27	0.40	0.40	0.40
Duct Bank Installation	0.01	0.10	0.10	0.00	0.01	0.01	16.08	0.40	0.40	0.40
Install Underground Cable	0.06	0.25	0.61	0.00	0.02	0.02	128.91	0.40	0.40	0.40
Restoration	0.17	1.01	1.16	0.00	0.08	0.08	162.73	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 1)</b>										
Install Cable	0.02	0.10	0.27	0.00	0.01	0.01	51.49	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Ungerground Conduit and Structures	0.00	0.02	0.03	0.00	0.00	0.00	7.62	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>										
Install Cable	0.01	0.05	0.13	0.00	0.00	0.00	25.75	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Ungerground Conduit and Structures	0.00	0.01	0.02	0.00	0.00	0.00	4.85	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>										
Install Cable	0.02	0.08	0.22	0.00	0.01	0.01	42.91	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Ungerground Conduit and Structures	0.00	0.02	0.03	0.00	0.00	0.00	7.62	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>										
Install Cable	0.02	0.10	0.28	0.00	0.01	0.01	54.93	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Ungerground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.70	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>										
Install Cable	0.02	0.07	0.18	0.00	0.01	0.00	34.33	0.00	0.00	1.00

**Table 4  
Total Off-Road Construction Equipment Emissions Summary**

**Total Off-Road Construction Equipment Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Ungerground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.00	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>										
Install 5 Foot Crossarm	0.01	0.04	0.12	0.00	0.00	0.00	22.31	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.00	0.00	3.43	1.00	0.00	0.00
Install Cable	0.03	0.11	0.31	0.00	0.01	0.01	60.08	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Underground Conduit from Pole to Pole	0.00	0.01	0.03	0.00	0.00	0.00	6.23	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>										
Install 5 Foot Crossarm	0.02	0.07	0.18	0.00	0.01	0.00	34.33	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.07	0.16	0.00	0.00	0.00	36.98	1.00	0.00	0.00
Install Down Guys	0.00	0.00	0.01	0.00	0.00	0.00	2.57	1.00	0.00	0.00
Install Cable	0.01	0.06	0.16	0.00	0.00	0.00	30.90	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.04	0.08	0.00	0.00	0.00	17.32	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>										
All	0.01	0.08	0.09	0.00	0.02	0.01	27.81	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>										
Months 1-12	10.78	42.51	85.10	0.17	3.33	3.05	16,301.45			
Months 13-24	7.21	29.36	56.22	0.12	2.26	2.08	11,383.55			
Months 19-30	6.61	26.05	52.93	0.10	2.10	1.93	10,034.64			
<b>12-Month Maximum</b>	<b>10.78</b>	<b>42.51</b>	<b>85.10</b>	<b>0.17</b>	<b>3.33</b>	<b>3.05</b>	<b>16,301.45</b>			
<b>Total GHG Emissions (metric tons)</b>							<b>29,800.87</b>			

**Table 5  
Annual Construction Emissions Summary**

**Maximum Annual Construction Emissions by Component on BLM Land<sup>a</sup>**

<b>Component</b>	<b>VOC (tons/year)</b>	<b>CO (tons/year)</b>	<b>NOX (tons/year)</b>	<b>SOX (tons/year)</b>	<b>PM10 (tons/year)</b>	<b>PM2.5 (tons/year)</b>	<b>CO2e (tons/year)</b>
Substation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Distribution for Station Light & Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Modifications to Existing Substations	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transmission and Subtransmission Lines	2.94	10.93	19.35	1.86	229.62	48.55	4,363.34
Telecommunications System	0.01	0.07	0.13	0.00	0.03	0.01	29.84
<b>Total</b>	<b>2.95</b>	<b>11.01</b>	<b>19.48</b>	<b>1.86</b>	<b>229.65</b>	<b>48.56</b>	<b>4,393.18</b>

<sup>a</sup> Maximum annual emissions are during months 1 through 12



**Table 6  
Operational Emissions on BLM Land**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Motor Vehicle Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	16.61
Motor Vehicle Fugitive PM	--	--	--	--	21.22	2.12	
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>21.22</b>	<b>2.12</b>	<b>16.61</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	--
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.01</b>

<sup>a</sup> Annual Emissions [tons] = Hourly Emissions [lb/hr] x Operating Time [hr/year]

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	1	N/A	6
1-Ton Crew Cab, 4x4, Transmission	1	2	N/A	16

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
1-Ton Crew Cab, 4x4, Gale-Pisgah	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab, 4x4, Transmission	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
1-Ton Crew Cab, 4x4, Gale-Pisgah	0.00	0.00	0.01	0.00	0.00	0.00	4.30	0.00	0.00	4.35
1-Ton Crew Cab, 4x4, Transmission	0.00	0.01	0.02	0.00	0.00	0.00	12.11	0.00	0.00	12.26
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>16.41</b>	<b>0.00</b>	<b>0.00</b>	<b>16.61</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
1-Ton Crew Cab, 4x4, Gale-Pisgah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 6  
Operational Emissions on BLM Land**

1-Ton Crew Cab, 4x4, Transmission	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	Paved	6	1	0.003	0.001	0.02	0.00	0.00	0.00
1-Ton Crew Cab, 4x4, Transmission	1	Unpaved	16	2	1.311	0.131	21.20	2.12	0.02	0.00
<b>Total</b>							<b>21.22</b>	<b>2.12</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 7  
Total Construction Emissions Summary**

**Total Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>											
Survey	0.00	0.00	0.00	0.00	0.07	0.01	0.68	0.000	1.00	0.00	0.00
Grading	1.16	4.78	12.23	0.02	534.60	154.96	2,203.85	0.000	1.00	0.00	0.00
Perimeter Wall	0.10	0.59	0.79	0.00	1.15	0.15	273.61	0.000	1.00	0.00	0.00
Water Well	0.02	0.16	0.14	0.00	0.54	0.06	70.96	0.000	1.00	0.00	0.00
Civil	0.18	1.13	4.69	0.01	25.40	2.76	1,026.29	0.000	1.00	0.00	0.00
Electrical	0.05	0.29	0.34	0.00	0.31	0.06	61.27	0.000	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.16	0.02	7.43	0.000	1.00	0.00	0.00
MEER	0.01	0.11	0.04	0.00	0.34	0.04	18.75	0.000	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.09	0.01	3.32	0.000	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.07	0.01	5.75	0.000	1.00	0.00	0.00
Asphalting	0.13	0.55	1.93	0.00	6.39	0.72	366.55	0.000	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>											
Survey	0.00	0.02	0.00	0.00	0.23	0.02	2.28	0.000	0.00	1.00	0.00
Civil	0.81	4.62	6.13	0.02	9.73	1.29	1,942.48	0.000	0.00	1.00	0.00
Electrical	0.19	1.41	1.36	0.00	1.09	0.22	246.08	0.000	0.00	0.67	0.67
Wiring	0.00	0.09	0.01	0.00	0.23	0.03	13.18	0.000	0.00	0.67	0.67
Control Room	0.01	0.14	0.06	0.00	0.35	0.05	24.75	0.000	0.00	0.67	0.67
Maintenance	0.00	0.06	0.01	0.00	0.24	0.03	8.29	0.000	0.00	0.67	0.67
Asphalting	0.10	0.41	1.11	0.00	2.19	0.26	188.30	0.000	0.00	0.00	1.00
Transformer Assembly	0.11	0.56	0.83	0.00	0.40	0.08	137.54	0.000	0.00	0.67	0.67
Testing	0.00	0.10	0.01	0.00	0.19	0.03	14.79	0.000	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>											
Overhead Construction	0.00	0.03	0.04	0.00	0.05	0.01	13.31	0.000	1.00	0.00	0.00
Underground Civil Construction	0.01	0.03	0.05	0.00	0.05	0.01	11.87	0.000	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.04	0.01	7.70	0.000	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.000	1.00	0.00	0.00
Civil	0.11	0.65	0.78	0.00	0.10	0.05	184.00	0.000	1.00	0.00	0.00
Electrical	0.06	0.34	0.50	0.00	0.08	0.04	84.18	0.000	1.00	0.00	0.00
Wiring	0.00	0.02	0.00	0.00	0.01	0.00	2.49	0.000	1.00	0.00	0.00
MEER	0.01	0.06	0.04	0.00	0.03	0.01	12.10	0.000	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	0.000	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	0.000	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>											

**Table 7  
Total Construction Emissions Summary**

**Total Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.000	1.00	0.00	0.00
Civil	0.20	1.17	1.37	0.00	0.19	0.09	342.12	0.000	1.00	0.00	0.00
Electrical	0.09	0.52	0.71	0.00	0.13	0.06	124.34	0.000	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.04	0.01	7.40	0.000	1.00	0.00	0.00
Control Room	0.01	0.07	0.05	0.00	0.03	0.01	14.83	0.000	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	0.000	1.00	0.00	0.00
Transformer Assembly	0.08	0.48	0.60	0.00	0.10	0.04	103.59	0.000	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	0.000	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>											
Survey	0.01	0.16	0.02	0.00	4.54	0.46	22.68	0.240	1.00	0.00	0.00
Construction and Materials Yards	3.60	16.40	31.77	0.07	5.19	1.93	6,520.20	0.000	0.40	0.40	0.40
Right-of-Way Clearing	0.43	1.69	3.34	0.01	179.96	57.20	663.30	0.240	1.00	0.00	0.00
Roads and Landing Work	0.99	3.85	7.73	0.02	308.53	95.31	1,537.43	0.240	1.00	0.00	0.00
Retaining Wall Installation	0.64	3.27	5.57	0.01	47.52	4.96	1,242.25	0.240	1.00	0.00	0.00
Wet Crossing Installation	0.63	3.24	5.62	0.01	51.20	5.34	1,131.31	0.240	1.00	0.00	0.00
Guard Structure Installation	0.26	1.32	2.17	0.01	20.37	2.12	549.64	0.240	0.40	0.40	0.40
Remove Existing Conductor & GW	0.82	3.93	8.70	0.02	69.01	7.19	1,866.29	0.240	0.40	0.40	0.40
Shoo-fly Pole Haul	0.01	0.03	0.05	0.00	0.58	0.06	9.45	0.240	0.40	0.40	0.40
Install Shoo-fly Pole	0.03	0.18	0.28	0.00	1.69	0.18	62.47	0.240	0.40	0.40	0.40
Shoo-fly Pole Assembly	0.01	0.05	0.06	0.00	1.12	0.12	12.24	0.240	0.40	0.40	0.40
LST Removal	0.75	3.27	5.74	0.01	23.44	2.61	965.89	0.240	0.40	0.40	0.40
LST Foundation Removal	0.18	0.88	1.30	0.00	4.77	0.54	305.44	0.240	0.40	0.40	0.40
Install LST Foundations	1.50	7.00	14.24	0.37	234.68	24.08	3,847.35	0.240	0.40	0.40	0.40
LST Steel Haul	0.68	1.57	4.53	1.46	20.76	2.22	1,153.35	0.240	0.40	0.40	0.40
LST Steel Assembly	4.81	19.86	34.12	5.30	74.80	9.03	7,123.61	0.240	0.40	0.40	0.40
LST Erection	7.33	16.00	32.95	9.49	99.77	11.15	7,429.85	0.240	0.40	0.40	0.40
Install TSP Foundations	1.12	5.35	10.27	0.03	156.47	16.03	2,694.49	0.240	0.40	0.40	0.40
TSP Haul	0.05	0.22	0.42	0.00	7.74	0.79	82.65	0.240	0.40	0.40	0.40
TSP Assembly	0.09	0.49	0.73	0.00	9.14	0.95	137.31	0.240	0.40	0.40	0.40
TSP Erection	0.09	0.49	0.70	0.00	6.53	0.69	130.79	0.240	0.40	0.40	0.40
Install/Transfer Conductor	5.48	19.51	23.94	2.55	105.70	11.90	6,428.40	0.240	0.40	0.40	0.40
Shoo-fly Pole Removal	0.01	0.05	0.11	0.00	0.89	0.09	21.16	0.240	0.40	0.40	0.40
Remove Shoo-fly Conductor & GW	0.05	0.25	0.57	0.00	5.39	0.56	118.12	0.240	0.40	0.40	0.40
Guard Structure Removal	0.28	1.39	2.33	0.00	25.85	2.69	420.43	0.240	0.40	0.40	0.40
115 kV Pole Removal	0.02	0.09	0.19	0.00	1.46	0.15	35.15	0.240	0.40	0.40	0.40

**Table 7**  
**Total Construction Emissions Summary**

**Total Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Install TSP Riser Foundations	0.08	0.42	0.82	0.00	16.28	1.66	212.32	0.240	0.40	0.40	0.40
TSP Riser Haul	0.00	0.02	0.04	0.00	0.77	0.08	8.27	0.240	0.40	0.40	0.40
TSP Riser Assembly	0.00	0.02	0.04	0.00	0.77	0.08	8.27	0.240	0.40	0.40	0.40
TSP Riser Erection	0.05	0.27	0.39	0.00	3.63	0.38	72.66	0.240	0.40	0.40	0.40
Vault Installation	0.04	0.23	0.34	0.00	6.23	0.64	71.30	0.240	0.40	0.40	0.40
Duct Bank Installation	0.02	0.15	0.18	0.00	7.19	0.73	39.99	0.240	0.40	0.40	0.40
Install Underground Cable	0.06	0.30	0.69	0.00	7.54	0.78	152.12	0.240	0.40	0.40	0.40
Restoration	0.18	1.24	1.24	0.00	93.73	29.01	207.60	0.240	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 1)</b>											
Install Cable	0.02	0.12	0.27	0.00	0.37	0.05	55.61	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.000	1.00	0.00	0.00
Ungerground Conduit and Structures	0.00	0.02	0.04	0.00	0.17	0.02	10.32	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>											
Install Cable	0.01	0.06	0.14	0.00	0.19	0.02	27.80	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.000	0.00	0.00	1.00
Ungerground Conduit and Structures	0.00	0.02	0.03	0.00	0.11	0.01	6.56	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>											
Install Cable	0.02	0.10	0.23	0.00	0.16	0.02	46.14	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.000	0.00	0.00	1.00
Ungerground Conduit and Structures	0.00	0.02	0.04	0.00	0.09	0.01	10.26	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>											
Install Cable	0.03	0.14	0.29	0.00	0.17	0.03	60.35	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.33	0.000	0.00	0.00	1.00
Ungerground Conduit and Structures	0.01	0.03	0.05	0.00	0.09	0.01	13.10	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>											
Install Cable	0.02	0.09	0.18	0.00	0.11	0.02	37.72	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.33	0.000	0.00	0.00	1.00
Ungerground Conduit and Structures	0.01	0.03	0.05	0.00	0.08	0.01	11.63	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>											
Install 5 Foot Crossarm	0.01	0.07	0.12	0.00	0.33	0.04	27.70	0.000	1.00	0.00	0.00
Install Down Guys	0.00	0.02	0.02	0.00	0.06	0.01	4.93	0.000	1.00	0.00	0.00
Install Cable	0.03	0.14	0.32	0.00	0.43	0.05	64.46	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.05	0.00	0.72	0.000	1.00	0.00	0.00
Ungerground Conduit from Pole to Pole	0.00	0.02	0.03	0.00	0.11	0.01	8.57	0.000	1.00	0.00	0.00
Restoration	0.00	0.01	0.00	0.00	0.12	0.01	2.02	0.000	1.00	0.00	0.00

**Table 7  
Total Construction Emissions Summary**

**Total Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>											
Install 5 Foot Crossarm	0.02	0.09	0.19	0.00	0.02	0.01	39.90	0.198	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.09	0.17	0.00	0.02	0.01	41.02	0.198	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.01	0.00	3.93	0.198	1.00	0.00	0.00
Install Cable	0.01	0.08	0.17	0.00	0.02	0.01	36.10	0.198	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.02	0.00	0.00	0.02	0.00	3.53	0.198	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.06	0.09	0.00	0.03	0.01	22.55	0.198	1.00	0.00	0.00
Restoration	0.00	0.02	0.01	0.00	0.01	0.00	3.69	0.198	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>											
All	0.01	0.08	0.09	0.00	0.02	0.01	27.81	0.000	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>											
Months 1-12	2.95	11.01	19.48	1.86	229.65	48.56	4,393.18				
Months 13-24	2.32	8.20	14.21	1.85	102.68	14.03	3,293.44				
Months 19-30	2.32	8.20	14.21	1.85	102.68	14.03	3,293.44				
<b>12-Month Maximum</b>	<b>2.95</b>	<b>11.01</b>	<b>19.48</b>	<b>1.86</b>	<b>229.65</b>	<b>48.56</b>	<b>4,393.18</b>				
<b>Total GHG Emissions (metric tons)</b>							<b>48,440.17</b>				

**Table 8  
Total Off-Road Construction Equipment Emissions Summary**

**Total Off-Road Construction Equipment Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Grading	1.06	3.88	8.46	0.01	0.32	0.30	1,360.58	0.000	1.00	0.00	0.00
Perimeter Wall	0.09	0.47	0.63	0.00	0.02	0.02	228.32	0.000	1.00	0.00	0.00
Water Well	0.02	0.11	0.12	0.00	0.00	0.00	62.74	0.000	1.00	0.00	0.00
Civil	0.06	0.33	0.43	0.00	0.02	0.02	97.48	0.000	1.00	0.00	0.00
Electrical	0.04	0.19	0.33	0.00	0.02	0.02	46.84	0.000	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	0.000	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Asphalting	0.09	0.32	0.76	0.00	0.03	0.03	109.57	0.000	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	1.00	0.00
Civil	0.77	4.00	5.00	0.02	0.22	0.20	1,647.56	0.000	0.00	1.00	0.00
Electrical	0.18	0.94	1.31	0.00	0.08	0.08	180.29	0.000	0.00	0.67	0.67
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.67	0.67
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	0.000	0.00	0.67	0.67
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.67	0.67
Asphalting	0.09	0.32	0.76	0.00	0.03	0.03	109.57	0.000	0.00	0.00	1.00
Transformer Assembly	0.10	0.45	0.82	0.00	0.04	0.03	122.66	0.000	0.00	0.67	0.67
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>											
Overhead Construction	0.00	0.02	0.04	0.00	0.00	0.00	12.68	0.000	1.00	0.00	0.00
Underground Civil Construction	0.01	0.02	0.04	0.00	0.00	0.00	10.39	0.000	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.00	0.00	7.27	0.000	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Civil	0.11	0.57	0.73	0.00	0.04	0.04	163.64	0.000	1.00	0.00	0.00
Electrical	0.06	0.26	0.49	0.00	0.02	0.02	72.67	0.000	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	0.000	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>											

**Table 8  
Total Off-Road Construction Equipment Emissions Summary**

**Total Off-Road Construction Equipment Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Civil	0.19	1.01	1.27	0.00	0.07	0.06	304.10	0.000	1.00	0.00	0.00
Electrical	0.09	0.38	0.70	0.00	0.03	0.03	103.81	0.000	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	0.000	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Transformer Assembly	0.08	0.37	0.59	0.00	0.03	0.03	88.72	0.000	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.240	1.00	0.00	0.00
Construction and Materials Yards	3.31	10.95	25.97	0.05	0.92	0.84	4,736.74	0.000	0.40	0.40	0.40
Right-of-Way Clearing	0.42	1.50	3.22	0.01	0.12	0.11	617.85	0.240	1.00	0.00	0.00
Roads and Landing Work	0.97	3.38	7.50	0.01	0.27	0.25	1,436.65	0.240	1.00	0.00	0.00
Retaining Wall Installation	0.61	2.73	4.65	0.01	0.18	0.16	997.93	0.240	1.00	0.00	0.00
Wet Crossing Installation	0.59	2.57	4.55	0.01	0.17	0.16	841.55	0.240	1.00	0.00	0.00
Guard Structure Installation	0.25	1.10	1.97	0.00	0.08	0.07	483.08	0.240	0.40	0.40	0.40
Remove Existing Conductor & GW	0.78	3.18	7.99	0.02	0.25	0.23	1,627.74	0.240	0.40	0.40	0.40
Shoo-fly Pole Haul	0.01	0.02	0.04	0.00	0.00	0.00	7.27	0.240	0.40	0.40	0.40
Install Shoo-fly Pole	0.03	0.15	0.26	0.00	0.01	0.01	55.01	0.240	0.40	0.40	0.40
Shoo-fly Pole Assembly	0.01	0.02	0.04	0.00	0.00	0.00	6.95	0.240	0.40	0.40	0.40
LST Removal	0.73	2.80	5.51	0.01	0.27	0.25	860.65	0.240	0.40	0.40	0.40
LST Foundation Removal	0.17	0.64	1.23	0.00	0.05	0.05	263.68	0.240	0.40	0.40	0.40
Install LST Foundations	1.25	5.10	9.09	0.03	0.30	0.28	2,580.73	0.240	0.40	0.40	0.40
LST Steel Haul	0.19	0.63	1.62	0.00	0.05	0.05	311.11	0.240	0.40	0.40	0.40
LST Steel Assembly	3.08	13.89	23.24	0.04	1.12	1.03	3,738.95	0.240	0.40	0.40	0.40
LST Erection	1.46	5.29	11.52	0.02	0.51	0.47	1,824.50	0.240	0.40	0.40	0.40
Install TSP Foundations	1.02	4.00	7.49	0.02	0.25	0.23	1,988.88	0.240	0.40	0.40	0.40
TSP Haul	0.04	0.14	0.34	0.00	0.01	0.01	58.12	0.240	0.40	0.40	0.40
TSP Assembly	0.09	0.34	0.67	0.00	0.03	0.03	105.03	0.240	0.40	0.40	0.40
TSP Erection	0.09	0.34	0.67	0.00	0.03	0.03	105.03	0.240	0.40	0.40	0.40
Install/Transfer Conductor	2.23	8.36	19.92	0.04	0.67	0.62	3,894.68	0.240	0.40	0.40	0.40
Shoo-fly Pole Removal	0.01	0.05	0.10	0.00	0.00	0.00	18.51	0.240	0.40	0.40	0.40
Remove Shoo-fly Conductor & GW	0.05	0.20	0.51	0.00	0.02	0.01	100.47	0.240	0.40	0.40	0.40
Guard Structure Removal	0.27	1.09	2.19	0.00	0.10	0.09	355.29	0.240	0.40	0.40	0.40
115 kV Pole Removal	0.02	0.08	0.17	0.00	0.01	0.01	30.66	0.240	0.40	0.40	0.40



**Table 8**  
**Total Off-Road Construction Equipment Emissions Summary**

**Total Off-Road Construction Equipment Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Install TSP Riser Foundations	0.07	0.26	0.49	0.00	0.02	0.02	129.98	0.240	0.40	0.40	0.40
TSP Riser Haul	0.00	0.01	0.03	0.00	0.00	0.00	5.81	0.240	0.40	0.40	0.40
TSP Riser Assembly	0.00	0.01	0.03	0.00	0.00	0.00	5.81	0.240	0.40	0.40	0.40
TSP Riser Erection	0.05	0.19	0.37	0.00	0.02	0.02	58.35	0.240	0.40	0.40	0.40
Vault Installation	0.03	0.17	0.26	0.00	0.01	0.01	48.27	0.240	0.40	0.40	0.40
Duct Bank Installation	0.01	0.10	0.10	0.00	0.01	0.01	16.08	0.240	0.40	0.40	0.40
Install Underground Cable	0.06	0.25	0.61	0.00	0.02	0.02	128.91	0.240	0.40	0.40	0.40
Restoration	0.17	1.01	1.16	0.00	0.08	0.08	162.73	0.240	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 1)</b>											
Install Cable	0.02	0.10	0.27	0.00	0.01	0.01	51.49	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Ungerground Conduit and Structures	0.00	0.02	0.03	0.00	0.00	0.00	7.62	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>											
Install Cable	0.01	0.05	0.13	0.00	0.00	0.00	25.75	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Ungerground Conduit and Structures	0.00	0.01	0.02	0.00	0.00	0.00	4.85	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>											
Install Cable	0.02	0.08	0.22	0.00	0.01	0.01	42.91	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Ungerground Conduit and Structures	0.00	0.02	0.03	0.00	0.00	0.00	7.62	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>											
Install Cable	0.02	0.10	0.28	0.00	0.01	0.01	54.93	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Ungerground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.70	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>											
Install Cable	0.02	0.07	0.18	0.00	0.01	0.00	34.33	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Ungerground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.00	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>											
Install 5 Foot Crossarm	0.01	0.04	0.12	0.00	0.00	0.00	22.31	0.000	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.00	0.00	3.43	0.000	1.00	0.00	0.00
Install Cable	0.03	0.11	0.31	0.00	0.01	0.01	60.08	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Ungerground Conduit from Pole to Pole	0.00	0.01	0.03	0.00	0.00	0.00	6.23	0.000	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00

**Table 8**  
**Total Off-Road Construction Equipment Emissions Summary**

**Total Off-Road Construction Equipment Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>											
Install 5 Foot Crossarm	0.02	0.07	0.18	0.00	0.01	0.00	34.33	0.198	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.07	0.16	0.00	0.00	0.00	36.98	0.198	1.00	0.00	0.00
Install Down Guys	0.00	0.00	0.01	0.00	0.00	0.00	2.57	0.198	1.00	0.00	0.00
Install Cable	0.01	0.06	0.16	0.00	0.00	0.00	30.90	0.198	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.198	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.04	0.08	0.00	0.00	0.00	17.32	0.198	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.198	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>											
All	0.01	0.08	0.09	0.00	0.02	0.01	27.81	0.000	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>											
Months 1-12	1.79	7.13	14.16	0.03	0.55	0.51	2,764.45				
Months 13-24	1.18	4.81	9.45	0.02	0.38	0.35	1,831.88				
Months 19-30	1.18	4.81	9.45	0.02	0.38	0.35	1,831.88				
<b>12-Month Maximum</b>	<b>1.79</b>	<b>7.13</b>	<b>14.16</b>	<b>0.03</b>	<b>0.55</b>	<b>0.51</b>	<b>2,764.45</b>				
<b>Total GHG Emissions (metric tons)</b>							<b>29,800.87</b>				

**Table 9  
Substation Construction Emissions - Initial Build Out  
Grading**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	17.67	64.61	141.06	0.22	5.40	4.97	22,676.3
Onsite Motor Vehicle Exhaust	0.02	0.15	0.86	0.00	0.03	0.01	173.6
Onsite Motor Vehicle Fugitive PM	--	--	--	--	46.67	4.67	
Earthwork Fugitive PM	--	--	--	--	8622.81	2546.36	
<b>Onsite Total</b>	<b>17.69</b>	<b>64.75</b>	<b>141.92</b>	<b>0.22</b>	<b>8674.91</b>	<b>2556.01</b>	<b>22849.9</b>
Offsite Motor Vehicle Exhaust	1.72	14.93	61.89	0.14	2.10	1.12	13,880.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	257.80	27.93	
<b>Offsite Total</b>	<b>1.72</b>	<b>14.93</b>	<b>61.89</b>	<b>0.14</b>	<b>259.91</b>	<b>29.05</b>	<b>13880.9</b>
<b>Total</b>	<b>19.41</b>	<b>79.68</b>	<b>203.81</b>	<b>0.36</b>	<b>8934.82</b>	<b>2585.06</b>	<b>36730.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	1.06	3.88	8.46	0.01	0.32	0.30	1,360.6
Onsite Motor Vehicle Exhaust	0.00	0.01	0.05	0.00	0.00	0.00	10.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	2.80	0.28	
Earthwork Fugitive PM	--	--	--	--	517.37	152.78	
<b>Onsite Total</b>	<b>1.06</b>	<b>3.89</b>	<b>8.52</b>	<b>0.01</b>	<b>520.49</b>	<b>153.36</b>	<b>1371.0</b>
Offsite Motor Vehicle Exhaust	0.10	0.90	3.71	0.01	0.13	0.07	832.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	13.98	1.53	
<b>Offsite Total</b>	<b>0.10</b>	<b>0.90</b>	<b>3.71</b>	<b>0.01</b>	<b>14.11</b>	<b>1.59</b>	<b>832.9</b>
<b>Total</b>	<b>1.16</b>	<b>4.78</b>	<b>12.23</b>	<b>0.02</b>	<b>534.60</b>	<b>154.96</b>	<b>2203.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
980 Loader	400	2	120	10
Grader/Blade	400	2	120	10
Compactor	100	1	120	5
Earth Mover	400	4	120	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
980 Loader	400	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Grader/Blade	400	0.158	0.552	1.238	0.002	0.045	0.041	229.278	0.014	0.006	Graders
Compactor	100	0.079	0.397	0.511	0.001	0.042	0.038	58.936	0.007	0.002	Rollers
Earth Mover	400	0.273	1.010	2.216	0.003	0.085	0.078	321.140	0.025	0.008	Scrapers

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 9  
Substation Construction Emissions - Initial Build Out  
Grading**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
980 Loader	3.18	11.18	25.12	0.05	0.90	0.83	4735.91	0.29	0.12	4,780.1
Grader/Blade	3.15	11.04	24.76	0.05	0.89	0.82	4585.56	0.28	0.12	4,628.5
Compactor	0.40	1.98	2.55	0.00	0.21	0.19	294.68	0.04	0.01	297.8
Earth Mover	10.94	40.40	88.63	0.13	3.40	3.13	12845.60	0.99	0.33	12,970.0
<b>Total</b>	<b>17.67</b>	<b>64.61</b>	<b>141.06</b>	<b>0.22</b>	<b>5.40</b>	<b>4.97</b>	<b>22461.76</b>	<b>1.59</b>	<b>0.58</b>	<b>22676.34</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
980 Loader	0.19	0.67	1.51	0.00	0.05	0.05	284.15	0.02	0.01	286.8
Grader/Blade	0.19	0.66	1.49	0.00	0.05	0.05	275.13	0.02	0.01	277.7
Compactor	0.02	0.12	0.15	0.00	0.01	0.01	17.68	0.00	0.00	17.9
Earth Mover	0.66	2.42	5.32	0.01	0.20	0.19	770.74	0.06	0.02	778.2
<b>Total</b>	<b>1.06</b>	<b>3.88</b>	<b>8.46</b>	<b>0.01</b>	<b>0.32</b>	<b>0.30</b>	<b>1347.71</b>	<b>0.10</b>	<b>0.04</b>	<b>1360.58</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Water Truck	4	120	N/A	4
Survey Truck	1	120	N/A	4
Soils Test Crew Truck	1	120	N/A	4
Dump Truck	60	120	N/A	0.5
<b>Offsite</b>				
Water Truck	4	120	N/A	27
Dump Truck	60	120	N/A	60
Worker Commute	15	120	N/A	58

<sup>a</sup> Dump trucks based on exporting 100,000 CY over 120 days and 14 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Survey Truck	LHDT	2.79E-04	1.93E-03	1.24E-02	1.10E-05	2.61E-04	5.48E-05	1.12E+00	1.29E-05	3.80E-05
Soils Test Crew Truck	LHDT	2.79E-04	1.93E-03	1.24E-02	1.10E-05	2.61E-04	5.48E-05	1.12E+00	1.29E-05	3.80E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 9  
Substation Construction Emissions - Initial Build Out  
Grading**

<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Water Truck	0.01	0.05	0.26	0.00	0.01	0.00	56.64	0.00	0.00	57.25
Survey Truck	0.00	0.01	0.05	0.00	0.00	0.00	4.46	0.00	0.00	4.51
Soils Test Crew Truck	0.00	0.01	0.05	0.00	0.00	0.00	4.46	0.00	0.00	4.51
Dump Truck	0.01	0.09	0.50	0.00	0.02	0.01	106.21	0.00	0.00	107.34
<b>Onsite Total</b>	<b>0.02</b>	<b>0.15</b>	<b>0.86</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>171.77</b>	<b>0.00</b>	<b>0.01</b>	<b>173.61</b>
<b>Offsite</b>										
Water Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Dump Truck	1.52	10.25	59.62	0.13	1.95	1.08	12744.91	0.07	0.43	12881.09
Worker Commute	0.15	4.37	0.48	0.01	0.09	0.00	606.44	0.04	0.02	613.36
<b>Offsite Total</b>	<b>1.72</b>	<b>14.93</b>	<b>61.89</b>	<b>0.14</b>	<b>2.10</b>	<b>1.12</b>	<b>13733.70</b>	<b>0.11</b>	<b>0.47</b>	<b>13880.88</b>
<b>Total</b>	<b>1.74</b>	<b>15.08</b>	<b>62.75</b>	<b>0.14</b>	<b>2.13</b>	<b>1.13</b>	<b>13905.47</b>	<b>0.11</b>	<b>0.47</b>	<b>14054.49</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.40	0.00	0.00	3.43
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
Soils Test Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
Dump Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.37	0.00	0.00	6.44
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.31</b>	<b>0.00</b>	<b>0.00</b>	<b>10.42</b>
<b>Offsite</b>										
Water Truck	0.00	0.02	0.11	0.00	0.00	0.00	22.94	0.00	0.00	23.19
Dump Truck	0.09	0.62	3.58	0.01	0.12	0.07	764.69	0.00	0.03	772.87
Worker Commute	0.01	0.26	0.03	0.00	0.01	0.00	36.39	0.00	0.00	36.80
<b>Offsite Total</b>	<b>0.10</b>	<b>0.90</b>	<b>3.71</b>	<b>0.01</b>	<b>0.13</b>	<b>0.07</b>	<b>824.02</b>	<b>0.01</b>	<b>0.03</b>	<b>832.85</b>
<b>Total</b>	<b>0.10</b>	<b>0.90</b>	<b>3.77</b>	<b>0.01</b>	<b>0.13</b>	<b>0.07</b>	<b>834.33</b>	<b>0.01</b>	<b>0.03</b>	<b>843.27</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 9  
Substation Construction Emissions - Initial Build Out  
Grading**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Water Truck	4	Unpaved	4	120	2.273	0.227	36.37	3.64	2.18	0.22
Survey Truck	1	Unpaved	4	120	1.102	0.110	4.41	0.44	0.26	0.03
Soils Test Crew Truck	1	Unpaved	4	120	1.475	0.147	5.90	0.59	0.35	0.04
<b>Onsite Total</b>							<b>46.67</b>	<b>4.67</b>	<b>2.80</b>	<b>0.28</b>
<b>Offsite</b>										
Water Truck	4	Unpaved	1.5	120	2.273	0.227	13.64	1.36	0.82	0.08
Water Truck	4	Paved	16.5	120	0.003	0.001	0.22	0.05	0.01	0.00
Dump Truck	60	Unpaved	1.5	120	2.273	0.227	204.57	20.46	12.27	1.23
Dump Truck	60	Paved	58.5	120	0.003	0.001	11.69	2.87	0.70	0.17
Worker Commute	15	Paved	58	120	0.003	0.001	2.90	0.71	0.17	0.04
Worker Commute	15	Unpaved	1.5	120	1.102	0.110	24.79	2.48	0.00	0.00
<b>Offsite Total</b>							<b>257.80</b>	<b>27.93</b>	<b>13.98</b>	<b>1.53</b>
<b>Total</b>							<b>304.48</b>	<b>32.60</b>	<b>16.78</b>	<b>1.81</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	25939	3112650	6.65E-02	1.01E-02	1723.73	261.02	103.42	15.66
Bulldozing, Scraping and Grading	hr	60	7200	114.985	38.089	6899.08	2285.34	413.95	137.12
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>8622.81</b>	<b>2546.36</b>	<b>517.37</b>	<b>152.78</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Based on handling 3,112,650 CY over 120 days

**Table 10**  
**Substation Construction Emissions - Initial Build Out**  
**Perimeter Wall**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.06	15.81	20.92	0.08	0.72	0.66	7,610.7
Onsite Motor Vehicle Exhaust	0.00	0.08	0.09	0.00	0.00	0.00	27.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	16.61	1.66	
Earthwork Fugitive PM	--	--	--	--	1.86	0.28	
<b>Onsite Total</b>	<b>3.06</b>	<b>15.89</b>	<b>21.01</b>	<b>0.08</b>	<b>19.19</b>	<b>2.60</b>	<b>7638.0</b>
Offsite Motor Vehicle Exhaust	0.23	3.77	5.29	0.02	0.22	0.09	1,482.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	36.48	4.07	
<b>Offsite Total</b>	<b>0.23</b>	<b>3.77</b>	<b>5.29</b>	<b>0.02</b>	<b>36.70</b>	<b>4.16</b>	<b>1482.3</b>
<b>Total</b>	<b>3.29</b>	<b>19.65</b>	<b>26.30</b>	<b>0.09</b>	<b>55.89</b>	<b>6.77</b>	<b>9120.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.47	0.63	0.00	0.02	0.02	228.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.50	0.05	
Earthwork Fugitive PM	--	--	--	--	0.03	0.00	
<b>Onsite Total</b>	<b>0.09</b>	<b>0.48</b>	<b>0.63</b>	<b>0.00</b>	<b>0.55</b>	<b>0.07</b>	<b>229.1</b>
Offsite Motor Vehicle Exhaust	0.01	0.11	0.16	0.00	0.01	0.00	44.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.60	0.07	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.11</b>	<b>0.16</b>	<b>0.00</b>	<b>0.61</b>	<b>0.08</b>	<b>44.5</b>
<b>Total</b>	<b>0.10</b>	<b>0.59</b>	<b>0.79</b>	<b>0.00</b>	<b>1.15</b>	<b>0.15</b>	<b>273.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	2	60	10
Bobcat	75	1	60	10
14-Ton Crane	250	1	60	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders
14-Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 10  
Substation Construction Emissions - Initial Build Out  
Perimeter Wall**

Driller	2.06	11.01	12.49	0.06	0.37	0.34	6220.58	0.19	0.16	6,274.5
Bobcat	0.29	2.69	2.41	0.01	0.14	0.13	427.23	0.03	0.01	431.3
14-Ton Crane	0.70	2.11	6.02	0.01	0.21	0.19	896.47	0.06	0.02	905.0
<b>Total</b>	<b>3.06</b>	<b>15.81</b>	<b>20.92</b>	<b>0.08</b>	<b>0.72</b>	<b>0.66</b>	<b>7544.28</b>	<b>0.28</b>	<b>0.20</b>	<b>7610.73</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.06	0.33	0.37	0.00	0.01	0.01	186.62	0.01	0.00	188.2
Bobcat	0.01	0.08	0.07	0.00	0.00	0.00	12.82	0.00	0.00	12.9
14-Ton Crane	0.02	0.06	0.18	0.00	0.01	0.01	26.89	0.00	0.00	27.2
<b>Total</b>	<b>0.09</b>	<b>0.47</b>	<b>0.63</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>226.33</b>	<b>0.01</b>	<b>0.01</b>	<b>228.32</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Concrete Truck	3	60	N/A	1
Flatbed Truck	2	60	N/A	1
Crew Truck	1	60	N/A	4
Foreman Truck	1	60	N/A	4
<b>Offsite</b>				
Concrete Truck	3	60	N/A	60
Flatbed Truck	2	60	N/A	60
Worker Commute	10	60	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flatbed Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Crew Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Foreman Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flatbed Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114



**Table 10  
Substation Construction Emissions - Initial Build Out  
Perimeter Wall**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Concrete Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Flatbed Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Crew Truck	0.00	0.03	0.00	0.00	0.00	0.00	4.62	0.00	0.00	4.68
Foreman Truck	0.00	0.03	0.00	0.00	0.00	0.00	4.62	0.00	0.00	4.68
<b>Onsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>26.94</b>	<b>0.00</b>	<b>0.00</b>	<b>27.26</b>
<b>Offsite</b>										
Concrete Truck	0.08	0.51	2.98	0.01	0.10	0.05	637.25	0.00	0.02	644.05
Flatbed Truck	0.05	0.34	1.99	0.00	0.07	0.04	424.83	0.00	0.01	429.37
Worker Commute	0.10	2.91	0.32	0.00	0.06	0.00	404.29	0.02	0.01	408.91
<b>Offsite Total</b>	<b>0.23</b>	<b>3.77</b>	<b>5.29</b>	<b>0.02</b>	<b>0.22</b>	<b>0.09</b>	<b>1466.37</b>	<b>0.03</b>	<b>0.05</b>	<b>1482.33</b>
<b>Total</b>	<b>0.23</b>	<b>3.84</b>	<b>5.38</b>	<b>0.02</b>	<b>0.23</b>	<b>0.09</b>	<b>1493.31</b>	<b>0.03</b>	<b>0.05</b>	<b>1509.59</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.32
Flatbed Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.81</b>	<b>0.00</b>	<b>0.00</b>	<b>0.82</b>
<b>Offsite</b>										
Concrete Truck	0.00	0.02	0.09	0.00	0.00	0.00	19.12	0.00	0.00	19.32
Flatbed Truck	0.00	0.01	0.06	0.00	0.00	0.00	12.74	0.00	0.00	12.88
Worker Commute	0.00	0.09	0.01	0.00	0.00	0.00	12.13	0.00	0.00	12.27
<b>Offsite Total</b>	<b>0.01</b>	<b>0.11</b>	<b>0.16</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>43.99</b>	<b>0.00</b>	<b>0.00</b>	<b>44.47</b>
<b>Total</b>	<b>0.01</b>	<b>0.12</b>	<b>0.16</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>44.80</b>	<b>0.00</b>	<b>0.00</b>	<b>45.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Concrete Truck	3	Unpaved	1	60	2.273	0.227	6.82	0.68	0.20	0.02
Flatbed Truck	2	Unpaved	1	60	2.273	0.227	4.55	0.45	0.14	0.01

**Table 10  
Substation Construction Emissions - Initial Build Out  
Perimeter Wall**

Crew Truck	1	Unpaved	4	60	1.311	0.131	5.24	0.52	0.16	0.02
<b>Onsite Total</b>							<b>16.61</b>	<b>1.66</b>	<b>0.50</b>	<b>0.05</b>
<b>Offsite</b>										
Concrete Truck	3	Unpaved	1.5	60	2.273	0.227	10.23	1.02	0.31	0.03
Concrete Truck	3	Paved	58.5	60	0.003	0.001	0.58	0.14	0.02	0.00
Flatbed Truck	2	Unpaved	1.5	60	2.273	0.227	6.82	0.68	0.20	0.02
Flatbed Truck	2	Paved	58.5	60	0.003	0.001	0.39	0.10	0.01	0.00
Worker Commute	10	Paved	58	60	0.003	0.001	1.93	0.47	0.06	0.01
Worker Commute	10	Unpaved	1.5	60	1.102	0.110	16.53	1.65	0.00	0.00
<b>Offsite Total</b>							<b>36.48</b>	<b>4.07</b>	<b>0.60</b>	<b>0.07</b>
<b>Total</b>							<b>53.09</b>	<b>5.73</b>	<b>1.10</b>	<b>0.12</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	28	830	6.65E-02	1.01E-02	1.86	0.28	0.03	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.86</b>	<b>0.28</b>	<b>0.03</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on handling 830 CY over 30 days

**Table 11  
Substation Construction Emissions - Initial Build Out  
Water Well**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.03	5.51	6.25	0.03	0.19	0.17	3,137.2
Onsite Motor Vehicle Exhaust	0.00	0.07	0.03	0.00	0.00	0.00	19.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	21.57	2.16	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.04</b>	<b>5.57</b>	<b>6.28</b>	<b>0.03</b>	<b>21.76</b>	<b>2.33</b>	<b>3156.2</b>
Offsite Motor Vehicle Exhaust	0.09	2.38	0.55	0.00	0.06	0.01	391.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	18.23	2.06	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.38</b>	<b>0.55</b>	<b>0.00</b>	<b>18.29</b>	<b>2.06</b>	<b>391.5</b>
<b>Total</b>	<b>1.12</b>	<b>7.96</b>	<b>6.83</b>	<b>0.04</b>	<b>40.05</b>	<b>4.39</b>	<b>3547.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.11	0.12	0.00	0.00	0.00	62.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.43	0.04	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.11</b>	<b>0.13</b>	<b>0.00</b>	<b>0.44</b>	<b>0.05</b>	<b>63.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	7.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>7.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.16</b>	<b>0.14</b>	<b>0.00</b>	<b>0.54</b>	<b>0.06</b>	<b>71.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Drill Rig	350	1	40	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Drill Rig	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Drill Rig	1.03	5.51	6.25	0.03	0.19	0.17	3110.29	0.09	0.08	3,137.2

**Table 11  
Substation Construction Emissions - Initial Build Out  
Water Well**

<b>Total</b>	<b>1.03</b>	<b>5.51</b>	<b>6.25</b>	<b>0.03</b>	<b>0.19</b>	<b>0.17</b>	<b>3110.29</b>	<b>0.09</b>	<b>0.08</b>	<b>3137.23</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Drill Rig	0.02	0.11	0.12	0.00	0.00	0.00	62.21	0.00	0.00	62.7
<b>Total</b>	<b>0.02</b>	<b>0.11</b>	<b>0.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>62.21</b>	<b>0.00</b>	<b>0.00</b>	<b>62.74</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Water Truck	1	40	N/A	1
Tool Truck	2	40	N/A	4
Crew Truck	2	40	N/A	4
<b>Offsite</b>				
Water Truck	1	40	N/A	18
Worker Commute	8	40	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Tool Truck	0.00	0.00	0.01	0.00	0.00	0.00	5.99	0.00	0.00	6.06

**Table 11  
Substation Construction Emissions - Initial Build Out  
Water Well**

Crew Truck	0.00	0.06	0.01	0.00	0.00	0.00	9.24	0.00	0.00	9.37
<b>Onsite Total</b>	<b>0.00</b>	<b>0.07</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>18.77</b>	<b>0.00</b>	<b>0.00</b>	<b>19.01</b>
<b>Offsite</b>										
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.09</b>	<b>2.38</b>	<b>0.55</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>387.16</b>	<b>0.02</b>	<b>0.01</b>	<b>391.53</b>
<b>Total</b>	<b>0.09</b>	<b>2.45</b>	<b>0.59</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>405.93</b>	<b>0.02</b>	<b>0.01</b>	<b>410.54</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.12
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.19
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.38</b>	<b>0.00</b>	<b>0.00</b>	<b>0.38</b>
<b>Offsite</b>										
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.27	0.00	0.00	1.29
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.47	0.00	0.00	6.54
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.74</b>	<b>0.00</b>	<b>0.00</b>	<b>7.83</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.12</b>	<b>0.00</b>	<b>0.00</b>	<b>8.21</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Water Truck	1	Unpaved	1	40	2.273	0.227	2.27	0.23	0.05	0.00
Tool Truck	2	Unpaved	4	40	1.102	0.110	8.81	0.88	0.18	0.02
Crew Truck	2	Unpaved	4	40	1.311	0.131	10.48	1.05	0.21	0.02
<b>Onsite Total</b>							<b>21.57</b>	<b>2.16</b>	<b>0.43</b>	<b>0.04</b>
<b>Offsite</b>										
Water Truck	1	Unpaved	1.5	40	2.273	0.227	3.41	0.34	0.07	0.01
Water Truck	1	Paved	16.5	40	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	8	Paved	58	40	0.003	0.001	1.54	0.38	0.03	0.01
Worker Commute	8	Unpaved	1.5	40	1.102	0.110	13.22	1.32	0.00	0.00
<b>Offsite Total</b>							<b>18.23</b>	<b>2.06</b>	<b>0.10</b>	<b>0.01</b>

**Table 11  
Substation Construction Emissions - Initial Build Out  
Water Well**

<b>Total</b>							<b>39.80</b>	<b>4.21</b>	<b>0.53</b>	<b>0.06</b>
--------------	--	--	--	--	--	--	--------------	-------------	-------------	-------------

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 12**  
**Substation Construction Emissions - Initial Build Out**  
**Civil**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.14	10.95	14.29	0.03	0.79	0.72	3,249.2
Onsite Motor Vehicle Exhaust	0.06	0.42	2.37	0.01	0.08	0.04	514.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	327.25	32.72	
Earthwork Fugitive PM	--	--	--	--	5.12	0.77	
<b>Onsite Total</b>	<b>2.20</b>	<b>11.37</b>	<b>16.66</b>	<b>0.04</b>	<b>333.23</b>	<b>34.27</b>	<b>3763.2</b>
Offsite Motor Vehicle Exhaust	3.64	26.30	139.68	0.30	4.62	2.54	30,447.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	522.84	56.48	
<b>Offsite Total</b>	<b>3.64</b>	<b>26.30</b>	<b>139.68</b>	<b>0.30</b>	<b>527.46</b>	<b>59.02</b>	<b>30447.4</b>
<b>Total</b>	<b>5.84</b>	<b>37.68</b>	<b>156.33</b>	<b>0.34</b>	<b>860.68</b>	<b>93.29</b>	<b>34210.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.06	0.33	0.43	0.00	0.02	0.02	97.5
Onsite Motor Vehicle Exhaust	0.00	0.01	0.07	0.00	0.00	0.00	15.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	9.80	0.98	
Earthwork Fugitive PM	--	--	--	--	0.15	0.02	
<b>Onsite Total</b>	<b>0.07</b>	<b>0.34</b>	<b>0.50</b>	<b>0.00</b>	<b>9.97</b>	<b>1.03</b>	<b>112.9</b>
Offsite Motor Vehicle Exhaust	0.11	0.79	4.19	0.01	0.14	0.08	913.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	15.29	1.65	
<b>Offsite Total</b>	<b>0.11</b>	<b>0.79</b>	<b>4.19</b>	<b>0.01</b>	<b>15.43</b>	<b>1.73</b>	<b>913.4</b>
<b>Total</b>	<b>0.18</b>	<b>1.13</b>	<b>4.69</b>	<b>0.01</b>	<b>25.40</b>	<b>2.76</b>	<b>1026.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	1	60	5
Excavator	85	2	60	3
Skip Loader	350	1	60	3
Forklift	100	1	60	4
Trencher	75	1	60	4
Bobcat	75	1	60	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Excavator	85	0.083	0.507	0.529	0.001	0.039	0.036	73.557	0.008	0.002	Excavators
Skip Loader	350	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
Trencher	75	0.108	0.456	0.665	0.001	0.055	0.051	64.837	0.010	0.002	Trenchers

**Table 12**  
**Substation Construction Emissions - Initial Build Out**  
**Civil**

Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders
--------	----	-------	-------	-------	-------	-------	-------	--------	-------	-------	--------------------

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	0.52	2.75	3.12	0.02	0.09	0.09	1555.15	0.05	0.04	1,568.6
Excavator	0.50	3.04	3.17	0.01	0.24	0.22	441.34	0.05	0.01	445.9
Skip Loader	0.48	1.68	3.77	0.01	0.13	0.12	710.39	0.04	0.02	717.0
Forklift	0.12	0.85	0.84	0.00	0.06	0.05	124.79	0.01	0.00	126.0
Trencher	0.43	1.82	2.66	0.00	0.22	0.20	259.35	0.04	0.01	262.3
Bobcat	0.09	0.81	0.72	0.00	0.04	0.04	128.17	0.01	0.00	129.4
<b>Total</b>	<b>2.14</b>	<b>10.95</b>	<b>14.29</b>	<b>0.03</b>	<b>0.79</b>	<b>0.72</b>	<b>3219.18</b>	<b>0.19</b>	<b>0.08</b>	<b>3249.19</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.02	0.08	0.09	0.00	0.00	0.00	46.65	0.00	0.00	47.1
Excavator	0.01	0.09	0.10	0.00	0.01	0.01	13.24	0.00	0.00	13.4
Skip Loader	0.01	0.05	0.11	0.00	0.00	0.00	21.31	0.00	0.00	21.5
Forklift	0.00	0.03	0.03	0.00	0.00	0.00	3.74	0.00	0.00	3.8
Trencher	0.01	0.05	0.08	0.00	0.01	0.01	7.78	0.00	0.00	7.9
Bobcat	0.00	0.02	0.02	0.00	0.00	0.00	3.85	0.00	0.00	3.9
<b>Total</b>	<b>0.06</b>	<b>0.33</b>	<b>0.43</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>96.58</b>	<b>0.01</b>	<b>0.00</b>	<b>97.48</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Dump Truck	1	60	N/A	1
Concrete Truck	42	60	N/A	1
Water Truck	2	60	N/A	1
Tool Truck	1	60	N/A	1
Gravel Delivery Truck	98	60	N/A	1
Inspection Services	1	20	N/A	1
<b>Offsite</b>				
Water Truck	1	60	N/A	18
Gravel Delivery Truck	98	60	N/A	60
Concrete Truck	42	60	N/A	60
Worker Commute	8	60	N/A	58



**Table 12**  
**Substation Construction Emissions - Initial Build Out**  
**Civil**

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck  
 Gravel delivery truck based on 42,550 CY over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Gravel Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Gravel Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Concrete Truck	0.02	0.12	0.70	0.00	0.02	0.01	148.69	0.00	0.01	150.28
Water Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Tool Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Gravel Delivery Truck	0.04	0.28	1.62	0.00	0.05	0.03	346.94	0.00	0.01	350.65
Inspection Services	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.06</b>	<b>0.42</b>	<b>2.37</b>	<b>0.01</b>	<b>0.08</b>	<b>0.04</b>	<b>508.57</b>	<b>0.00</b>	<b>0.02</b>	<b>514.01</b>
<b>Offsite</b>										
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Gravel Delivery Truck	2.49	16.74	97.39	0.21	3.19	1.77	20816.69	0.12	0.71	21039.11
Concrete Truck	1.07	7.18	41.74	0.09	1.37	0.76	8921.44	0.05	0.30	9016.76
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>3.64</b>	<b>26.30</b>	<b>139.68</b>	<b>0.30</b>	<b>4.62</b>	<b>2.54</b>	<b>30125.29</b>	<b>0.19</b>	<b>1.03</b>	<b>30447.40</b>
<b>Total</b>	<b>3.70</b>	<b>26.72</b>	<b>142.05</b>	<b>0.30</b>	<b>4.70</b>	<b>2.58</b>	<b>30633.85</b>	<b>0.19</b>	<b>1.04</b>	<b>30961.41</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
---------	----------------------------	---------------------------	----------------------------	----------------------------	-----------------------------	------------------------------	----------------------------	----------------------------	----------------------------	-----------------------------

**Table 12**  
**Substation Construction Emissions - Initial Build Out**  
**Civil**

<b>Onsite</b>										
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Concrete Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.46	0.00	0.00	4.51
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.04
Gravel Delivery Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.41	0.00	0.00	10.52
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>15.23</b>	<b>0.00</b>	<b>0.00</b>	<b>15.40</b>
<b>Offsite</b>										
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.91	0.00	0.00	1.93
Gravel Delivery Truck	0.07	0.50	2.92	0.01	0.10	0.05	624.50	0.00	0.02	631.17
Concrete Truck	0.03	0.22	1.25	0.00	0.04	0.02	267.64	0.00	0.01	270.50
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.70	0.00	0.00	9.81
<b>Offsite Total</b>	<b>0.11</b>	<b>0.79</b>	<b>4.19</b>	<b>0.01</b>	<b>0.14</b>	<b>0.08</b>	<b>903.76</b>	<b>0.01</b>	<b>0.03</b>	<b>913.42</b>
<b>Total</b>	<b>0.11</b>	<b>0.80</b>	<b>4.26</b>	<b>0.01</b>	<b>0.14</b>	<b>0.08</b>	<b>918.99</b>	<b>0.01</b>	<b>0.03</b>	<b>928.82</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Dump Truck	1	Unpaved	1	60	2.273	0.227	2.27	0.23	0.07	0.01
Concrete Truck	42	Unpaved	1	60	2.273	0.227	95.47	9.55	2.86	0.29
Water Truck	2	Unpaved	1	60	2.273	0.227	4.55	0.45	0.14	0.01
Tool Truck	1	Unpaved	1	60	1.102	0.110	1.10	0.11	0.03	0.00
Gravel Delivery Truck	98	Unpaved	1	60	2.273	0.227	222.76	22.28	6.68	0.67
Inspection Services	1	Unpaved	1	20	1.102	0.110	1.10	0.11	0.01	0.00
<b>Onsite Total</b>							<b>327.25</b>	<b>32.72</b>	<b>9.80</b>	<b>0.98</b>
<b>Offsite</b>										
Water Truck	1	Unpaved	1.5	60	2.273	0.227	3.41	0.34	0.10	0.01
Water Truck	1	Paved	16.5	60	0.003	0.001	0.05	0.01	0.00	0.00
Gravel Delivery Truck	98	Unpaved	1.5	60	2.273	0.227	334.14	33.41	10.02	1.00
Gravel Delivery Truck	98	Paved	58.5	60	0.003	0.001	19.09	4.69	0.57	0.14
Concrete Truck	42	Unpaved	1.5	60	2.273	0.227	143.20	14.32	4.30	0.43
Concrete Truck	42	Paved	58.5	60	0.003	0.001	8.18	2.01	0.25	0.06
Worker Commute	8	Paved	58	60	0.003	0.001	1.54	0.38	0.05	0.01
Worker Commute	8	Unpaved	1.5	60	1.102	0.110	13.22	1.32	0.00	0.00
<b>Offsite Total</b>							<b>522.84</b>	<b>56.48</b>	<b>15.29</b>	<b>1.65</b>
<b>Total</b>							<b>850.09</b>	<b>89.21</b>	<b>25.08</b>	<b>2.63</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 12**  
**Substation Construction Emissions - Initial Build Out**  
**Civil**

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	77	4600	6.65E-02	1.01E-02	5.12	0.77	0.15	0.02
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>5.12</b>	<b>0.77</b>	<b>0.15</b>	<b>0.02</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on handling 4,600 CY over 60 days

**Table 13  
Substation Construction Emissions - Initial Build Out  
Electrical**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.65	6.81	13.06	0.02	0.62	0.57	1,960.9
Onsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	4.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	7.30	0.73	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.65</b>	<b>6.82</b>	<b>13.07</b>	<b>0.02</b>	<b>7.92</b>	<b>1.30</b>	<b>1965.1</b>
Offsite Motor Vehicle Exhaust	0.10	2.91	0.32	0.00	0.06	0.00	408.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	18.46	2.13	
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>18.52</b>	<b>2.13</b>	<b>408.9</b>
<b>Total</b>	<b>1.75</b>	<b>9.74</b>	<b>13.39</b>	<b>0.03</b>	<b>26.44</b>	<b>3.43</b>	<b>2374.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.04	0.19	0.33	0.00	0.02	0.02	46.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.23	0.02	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.04</b>	<b>0.19</b>	<b>0.33</b>	<b>0.00</b>	<b>0.25</b>	<b>0.04</b>	<b>47.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.10	0.01	0.00	0.00	0.00	14.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>14.3</b>
<b>Total</b>	<b>0.05</b>	<b>0.29</b>	<b>0.34</b>	<b>0.00</b>	<b>0.31</b>	<b>0.06</b>	<b>61.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Reach Manlift	75	1	70	4
Manlift	75	2	70	4
14 Ton Crane	250	1	70	3
150 Ton Crane	300	1	10	4
5 Ton Crane	250	1	70	3
Forklift	100	1	70	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Reach Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
14 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
150 Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
5 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

**Table 13  
Substation Construction Emissions - Initial Build Out  
Electrical**

Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
----------	-----	-------	-------	-------	-------	-------	-------	--------	-------	-------	-----------

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Reach Manlift	0.17	0.94	1.21	0.00	0.09	0.08	152.15	0.01	0.00	153.7
Manlift	0.33	1.88	2.42	0.00	0.18	0.16	304.30	0.03	0.01	307.4
14 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
150 Ton Crane	0.53	1.77	4.28	0.01	0.15	0.14	719.76	0.05	0.02	726.6
5 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
Forklift	0.09	0.64	0.63	0.00	0.04	0.04	93.59	0.01	0.00	94.5
<b>Total</b>	<b>1.65</b>	<b>6.81</b>	<b>13.06</b>	<b>0.02</b>	<b>0.62</b>	<b>0.57</b>	<b>1942.15</b>	<b>0.15</b>	<b>0.05</b>	<b>1960.95</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Reach Manlift	0.01	0.03	0.04	0.00	0.00	0.00	5.33	0.00	0.00	5.4
Manlift	0.01	0.07	0.08	0.00	0.01	0.01	10.65	0.00	0.00	10.8
14 Ton Crane	0.01	0.03	0.08	0.00	0.00	0.00	11.77	0.00	0.00	11.9
150 Ton Crane	0.00	0.01	0.02	0.00	0.00	0.00	3.60	0.00	0.00	3.6
5 Ton Crane	0.01	0.03	0.08	0.00	0.00	0.00	11.77	0.00	0.00	11.9
Forklift	0.00	0.02	0.02	0.00	0.00	0.00	3.28	0.00	0.00	3.3
<b>Total</b>	<b>0.04</b>	<b>0.19</b>	<b>0.33</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>46.38</b>	<b>0.00</b>	<b>0.00</b>	<b>46.84</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Pick-up Truck	2	70	N/A	1
Crew Truck	2	70	N/A	1
Inspection Services	1	20	N/A	1
<b>Offsite</b>				
Worker Commute	10	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										

**Table 13  
Substation Construction Emissions - Initial Build Out  
Electrical**

Pick-up Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
Inspection Services	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.15</b>	<b>0.00</b>	<b>0.00</b>	<b>4.20</b>
<b>Offsite</b>										
Worker Commute	0.10	2.91	0.32	0.00	0.06	0.00	404.29	0.02	0.01	408.91
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>404.29</b>	<b>0.02</b>	<b>0.01</b>	<b>408.91</b>
<b>Total</b>	<b>0.10</b>	<b>2.92</b>	<b>0.32</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>408.44</b>	<b>0.02</b>	<b>0.01</b>	<b>413.11</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.12</b>
<b>Offsite</b>										
Worker Commute	0.00	0.10	0.01	0.00	0.00	0.00	14.15	0.00	0.00	14.31
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.15</b>	<b>0.00</b>	<b>0.00</b>	<b>14.31</b>
<b>Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.27</b>	<b>0.00</b>	<b>0.00</b>	<b>14.43</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Pick-up Truck	2	Unpaved	1	70	1.790	0.179	3.58	0.36	0.13	0.01

**Table 13  
Substation Construction Emissions - Initial Build Out  
Electrical**

Crew Truck	2	Unpaved	1	70	1.311	0.131	2.62	0.26	0.09	0.01
Inspection Services	1	Unpaved	1	20	1.102	0.110	1.10	0.11	0.01	0.00
<b>Onsite Total</b>							<b>7.30</b>	<b>0.73</b>	<b>0.23</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	10	Paved	58	70	0.003	0.001	1.93	0.47	0.07	0.02
Worker Commute	10	Unpaved	1.5	70	1.102	0.110	16.53	1.65	0.00	0.00
<b>Offsite Total</b>							<b>18.46</b>	<b>2.13</b>	<b>0.07</b>	<b>0.02</b>
<b>Total</b>							<b>25.76</b>	<b>2.86</b>	<b>0.30</b>	<b>0.04</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 14  
Substation Construction Emissions - Initial Build Out  
Wiring**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	2.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	4.06	0.41	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>4.06</b>	<b>0.41</b>	<b>2.3</b>
Offsite Motor Vehicle Exhaust	0.06	1.75	0.19	0.00	0.04	0.00	245.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	11.07	1.28	
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>11.11</b>	<b>1.28</b>	<b>245.3</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>15.17</b>	<b>1.68</b>	<b>247.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.12	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	7.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>7.4</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.16</b>	<b>0.02</b>	<b>7.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions



**Table 14  
Substation Construction Emissions - Initial Build Out  
Wiring**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Wiring Truck	1	60	N/A	1
Pick-up Truck	1	60	N/A	1
<b>Offsite</b>				
Worker Commute	6	60	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Wiring Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Pick-up Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Pick-up Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.31</b>	<b>0.00</b>	<b>0.00</b>	<b>2.34</b>
<b>Offsite</b>										
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>242.58</b>	<b>0.01</b>	<b>0.01</b>	<b>245.34</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>244.88</b>	<b>0.01</b>	<b>0.01</b>	<b>247.69</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 14  
Substation Construction Emissions - Initial Build Out  
Wiring**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.04
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.04
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>
<b>Offsite</b>										
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	7.28	0.00	0.00	7.36
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.28</b>	<b>0.00</b>	<b>0.00</b>	<b>7.36</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.35</b>	<b>0.00</b>	<b>0.00</b>	<b>7.43</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Wiring Truck	1	Unpaved	1	60	2.273	0.227	2.27	0.23	0.07	0.01
Pick-up Truck	1	Unpaved	1	60	1.790	0.179	1.79	0.18	0.05	0.01
<b>Onsite Total</b>							<b>4.06</b>	<b>0.41</b>	<b>0.12</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	6	Paved	58	60	0.003	0.001	1.16	0.28	0.03	0.01
Worker Commute	6	Unpaved	1.5	60	1.102	0.110	9.92	0.99	0.00	0.00
<b>Offsite Total</b>							<b>11.07</b>	<b>1.28</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>15.14</b>	<b>1.68</b>	<b>0.16</b>	<b>0.02</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 15**  
**Substation Construction Emissions - Initial Build Out**  
**MEER**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.79	2.66	6.43	0.01	0.23	0.21	1,089.8
Onsite Motor Vehicle Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	5.5
Onsite Motor Vehicle Fugitive PM	--	--	--	--	6.82	0.68	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.79</b>	<b>2.67</b>	<b>6.45</b>	<b>0.01</b>	<b>7.05</b>	<b>0.90</b>	<b>1095.3</b>
Offsite Motor Vehicle Exhaust	0.08	2.33	0.25	0.00	0.05	0.00	327.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	14.77	1.70	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>14.81</b>	<b>1.70</b>	<b>327.1</b>
<b>Total</b>	<b>0.88</b>	<b>5.00</b>	<b>6.70</b>	<b>0.01</b>	<b>21.87</b>	<b>2.60</b>	<b>1422.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	5.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.27	0.03	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.27</b>	<b>0.03</b>	<b>5.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.09	0.01	0.00	0.00	0.00	13.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.06	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.06</b>	<b>0.02</b>	<b>13.1</b>
<b>Total</b>	<b>0.01</b>	<b>0.11</b>	<b>0.04</b>	<b>0.00</b>	<b>0.34</b>	<b>0.04</b>	<b>18.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30 Ton Crane	350	1	10	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30 Ton Crane	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30 Ton Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
<b>Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.43</b>	<b>0.01</b>	<b>0.23</b>	<b>0.21</b>	<b>1079.64</b>	<b>0.07</b>	<b>0.03</b>	<b>1089.84</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 15**  
**Substation Construction Emissions - Initial Build Out**  
**MEER**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30 Ton Crane	0.00	0.01	0.03	0.00	0.00	0.00	5.40	0.00	0.00	5.4
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.40</b>	<b>0.00</b>	<b>0.00</b>	<b>5.45</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	80	N/A	1
Stake Truck	1	80	N/A	1
Wiring Truck	1	80	N/A	1
<b>Offsite</b>				
Worker Commute	8	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Wiring Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Stake Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.44</b>	<b>0.00</b>	<b>0.00</b>	<b>5.51</b>
<b>Offsite</b>										
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>323.43</b>	<b>0.02</b>	<b>0.01</b>	<b>327.13</b>
<b>Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.27</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>328.88</b>	<b>0.02</b>	<b>0.01</b>	<b>332.63</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 15  
Substation Construction Emissions - Initial Build Out  
MEER**

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>
<b>Offsite</b>										
Worker Commute	0.00	0.09	0.01	0.00	0.00	0.00	12.94	0.00	0.00	13.09
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.94</b>	<b>0.00</b>	<b>0.00</b>	<b>13.09</b>
<b>Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>13.16</b>	<b>0.00</b>	<b>0.00</b>	<b>13.31</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
Stake Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
Wiring Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
<b>Onsite Total</b>							<b>6.82</b>	<b>0.68</b>	<b>0.27</b>	<b>0.03</b>
<b>Offsite</b>										
Worker Commute	8	Paved	58	80	0.003	0.001	1.54	0.38	0.06	0.02
Worker Commute	8	Unpaved	1.5	80	1.102	0.110	13.22	1.32	0.00	0.00
<b>Offsite Total</b>							<b>14.77</b>	<b>1.70</b>	<b>0.06</b>	<b>0.02</b>
<b>Total</b>							<b>21.58</b>	<b>2.38</b>	<b>0.33</b>	<b>0.04</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00

**Table 15**  
**Substation Construction Emissions - Initial Build Out**  
**MEER**

<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	--	--	--	--	--	-------------	-------------	-------------	-------------

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 16  
Substation Construction Emissions - Initial Build Out  
Maintenance**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	2.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	3.93	0.39	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.93</b>	<b>0.39</b>	<b>2.3</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.38	0.85	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>7.41</b>	<b>0.85</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>11.34</b>	<b>1.24</b>	<b>165.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.08	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>3.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 16**  
**Substation Construction Emissions - Initial Build Out**  
**Maintenance**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Foreman Truck	1	40	N/A	1
Crew Truck	2	40	N/A	1
<b>Offsite</b>				
Worker Commute	4	40	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Foreman Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.25</b>	<b>0.00</b>	<b>0.00</b>	<b>2.27</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**



**Table 16**  
**Substation Construction Emissions - Initial Build Out**  
**Maintenance**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>
<b>Offsite</b>										
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>	<b>0.00</b>	<b>0.00</b>	<b>3.27</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.28</b>	<b>0.00</b>	<b>0.00</b>	<b>3.32</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Foreman Truck	1	Unpaved	1	40	1.311	0.131	1.31	0.13	0.03	0.00
Crew Truck	2	Unpaved	1	40	1.311	0.131	2.62	0.26	0.05	0.01
<b>Onsite Total</b>							<b>3.93</b>	<b>0.39</b>	<b>0.08</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	40	0.003	0.001	0.77	0.19	0.02	0.00
Worker Commute	4	Unpaved	1.5	40	1.102	0.110	6.61	0.66	0.00	0.00
<b>Offsite Total</b>							<b>7.38</b>	<b>0.85</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>11.31</b>	<b>1.24</b>	<b>0.09</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 17  
Substation Construction Emissions - Initial Build Out  
Testing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	1.31	0.13	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.31</b>	<b>0.13</b>	<b>0.8</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.38	0.85	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>7.41</b>	<b>0.85</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>8.72</b>	<b>0.98</b>	<b>164.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.04	0.00	0.00	0.00	0.00	5.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>5.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 17**  
**Substation Construction Emissions - Initial Build Out**  
**Testing**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Crew Truck	1	70	N/A	1
<b>Offsite</b>				
Worker Commute	4	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.75</b>	<b>0.00</b>	<b>0.00</b>	<b>0.76</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.47</b>	<b>0.01</b>	<b>0.01</b>	<b>164.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										

**Table 17**  
**Substation Construction Emissions - Initial Build Out**  
**Testing**

Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>
<b>Offsite</b>										
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.66</b>	<b>0.00</b>	<b>0.00</b>	<b>5.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.69</b>	<b>0.00</b>	<b>0.00</b>	<b>5.75</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Crew Truck	1	Unpaved	1	70	1.311	0.131	1.31	0.13	0.05	0.00
<b>Onsite Total</b>							<b>1.31</b>	<b>0.13</b>	<b>0.05</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	70	0.003	0.001	0.77	0.19	0.03	0.01
Worker Commute	4	Unpaved	1.5	70	1.102	0.110	6.61	0.66	0.00	0.00
<b>Offsite Total</b>							<b>7.38</b>	<b>0.85</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>8.69</b>	<b>0.98</b>	<b>0.07</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 18**  
**Substation Construction Emissions - Initial Build Out**  
**Asphalting**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	5.70	21.43	50.61	0.08	1.90	1.75	7,304.9
Onsite Motor Vehicle Exhaust	0.03	0.18	1.01	0.00	0.03	0.02	219.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	139.00	13.90	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
Asphaltic Paving VOC	0.7	--	--	--	--	--	--
<b>Onsite Total</b>	<b>6.47</b>	<b>21.61</b>	<b>51.63</b>	<b>0.08</b>	<b>140.94</b>	<b>15.67</b>	<b>7524.38</b>
Offsite Motor Vehicle Exhaust	2.04	15.07	77.70	0.17	2.58	1.41	16,990.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	292.21	31.60	
<b>Offsite Total</b>	<b>2.04</b>	<b>15.07</b>	<b>77.70</b>	<b>0.17</b>	<b>294.79</b>	<b>33.01</b>	<b>16990.8</b>
<b>Total</b>	<b>8.52</b>	<b>36.69</b>	<b>129.33</b>	<b>0.25</b>	<b>435.73</b>	<b>48.68</b>	<b>24515.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.32	0.76	0.00	0.03	0.03	109.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.01	0.00	0.00	0.00	2.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	2.09	0.21	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
Asphaltic Paving VOC	0.01	--	--	--	--	--	--
<b>Onsite Total</b>	<b>0.10</b>	<b>0.32</b>	<b>0.77</b>	<b>0.00</b>	<b>2.11</b>	<b>0.23</b>	<b>111.7</b>
Offsite Motor Vehicle Exhaust	0.03	0.23	1.17	0.00	0.04	0.02	254.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	4.23	0.46	
<b>Offsite Total</b>	<b>0.03</b>	<b>0.23</b>	<b>1.17</b>	<b>0.00</b>	<b>4.27</b>	<b>0.48</b>	<b>254.9</b>
<b>Total</b>	<b>0.13</b>	<b>0.55</b>	<b>1.93</b>	<b>0.00</b>	<b>6.39</b>	<b>0.72</b>	<b>366.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Paving Roller	200	2	30	10
Asphalt Paver	250	1	30	10
Tractor	150	1	30	10
Asphalt Curb Machine	250	1	30	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Paving Roller	200	0.104	0.346	0.995	0.002	0.033	0.031	152.952	0.009	0.004	Rollers
Asphalt Paver	250	0.176	0.537	1.546	0.002	0.059	0.054	194.197	0.016	0.005	Pavers
Tractor	150	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Asphalt Curb Machine	250	0.108	0.330	0.969	0.001	0.036	0.033	122.182	0.010	0.003	Paving Equipment

a From Table 111

**Table 18**  
**Substation Construction Emissions - Initial Build Out**  
**Asphalting**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Paving Roller	2.08	6.92	19.89	0.03	0.67	0.61	3059.05	0.19	0.08	3,087.6
Asphalt Paver	1.76	5.37	15.46	0.02	0.59	0.54	1941.97	0.16	0.05	1,961.0
Tractor	0.79	5.84	5.57	0.01	0.29	0.27	1012.96	0.07	0.03	1,022.7
Asphalt Curb Machine	1.08	3.30	9.69	0.01	0.36	0.33	1221.82	0.10	0.03	1,233.7
<b>Total</b>	<b>5.70</b>	<b>21.43</b>	<b>50.61</b>	<b>0.08</b>	<b>1.90</b>	<b>1.75</b>	<b>7235.80</b>	<b>0.51</b>	<b>0.19</b>	<b>7304.95</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Paving Roller	0.03	0.10	0.30	0.00	0.01	0.01	45.89	0.00	0.00	46.3
Asphalt Paver	0.03	0.08	0.23	0.00	0.01	0.01	29.13	0.00	0.00	29.4
Tractor	0.01	0.09	0.08	0.00	0.00	0.00	15.19	0.00	0.00	15.3
Asphalt Curb Machine	0.02	0.05	0.15	0.00	0.01	0.00	18.33	0.00	0.00	18.5
<b>Total</b>	<b>0.09</b>	<b>0.32</b>	<b>0.76</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>108.54</b>	<b>0.01</b>	<b>0.00</b>	<b>109.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Stake Truck	1	30	N/A	1
Dump Truck	1	30	N/A	1
Crew Truck	2	30	N/A	1
Asphalt Delivery Truck	22	30	N/A	1
Aggregate Base Delivery Truck	36	30	N/A	1
<b>Offsite</b>				
Asphalt Delivery Truck	22	30	N/A	60
Aggregate Base Delivery Truck	56	30	N/A	60
Worker Commute	6	30	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Crew Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 18**  
**Substation Construction Emissions - Initial Build Out**  
**Asphalting**

Asphalt Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Aggregate Base Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
<b>Offsite</b>										
Asphalt Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Aggregate Base Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Stake Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Crew Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Asphalt Delivery Truck	0.01	0.06	0.36	0.00	0.01	0.01	77.89	0.00	0.00	78.72
Aggregate Base Delivery Truck	0.02	0.10	0.60	0.00	0.02	0.01	127.45	0.00	0.00	128.81
<b>Onsite Total</b>	<b>0.03</b>	<b>0.18</b>	<b>1.01</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>217.11</b>	<b>0.00</b>	<b>0.01</b>	<b>219.43</b>
<b>Offsite</b>										
Asphalt Delivery Truck	0.56	3.76	21.86	0.05	0.72	0.40	4673.13	0.03	0.16	4723.07
Aggregate Base Delivery Truck	1.42	9.57	55.65	0.12	1.82	1.01	11895.25	0.07	0.41	12022.35
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>2.04</b>	<b>15.07</b>	<b>77.70</b>	<b>0.17</b>	<b>2.58</b>	<b>1.41</b>	<b>16810.96</b>	<b>0.11</b>	<b>0.57</b>	<b>16990.76</b>
<b>Total</b>	<b>2.07</b>	<b>15.26</b>	<b>78.71</b>	<b>0.17</b>	<b>2.61</b>	<b>1.43</b>	<b>17028.07</b>	<b>0.11</b>	<b>0.58</b>	<b>17210.19</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Aggregate Base Delivery Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.91	0.00	0.00	1.93
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.09</b>	<b>0.00</b>	<b>0.00</b>	<b>2.11</b>
<b>Offsite</b>										
Asphalt Delivery Truck	0.01	0.06	0.33	0.00	0.01	0.01	70.10	0.00	0.00	70.85
Aggregate Base Delivery Truck	0.02	0.14	0.83	0.00	0.03	0.02	178.43	0.00	0.01	180.34
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	3.64	0.00	0.00	3.68
<b>Offsite Total</b>	<b>0.03</b>	<b>0.23</b>	<b>1.17</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>252.16</b>	<b>0.00</b>	<b>0.01</b>	<b>254.86</b>
<b>Total</b>	<b>0.03</b>	<b>0.23</b>	<b>1.18</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>254.25</b>	<b>0.00</b>	<b>0.01</b>	<b>256.97</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 18**  
**Substation Construction Emissions - Initial Build Out**  
**Asphalting**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Stake Truck	1	Unpaved	1	30	2.273	0.227	2.27	0.23	0.03	0.00
Dump Truck	1	Unpaved	1	30	2.273	0.227	2.27	0.23	0.03	0.00
Crew Truck	2	Unpaved	1	30	1.311	0.131	2.62	0.26	0.04	0.00
Asphalt Delivery Truck	22	Unpaved	1	30	2.273	0.227	50.01	5.00	0.75	0.08
Aggregate Base Delivery Truck	36	Unpaved	1	30	2.273	0.227	81.83	8.18	1.23	0.12
<b>Onsite Total</b>							<b>139.00</b>	<b>13.90</b>	<b>2.09</b>	<b>0.21</b>
<b>Offsite</b>										
Asphalt Delivery Truck	22	Unpaved	1.5	30	2.273	0.227	75.01	7.50	1.13	0.11
Asphalt Delivery Truck	22	Paved	58.5	30	0.003	0.001	4.29	1.05	0.06	0.02
Aggregate Base Delivery Truck	56	Unpaved	1.5	30	2.273	0.227	190.94	19.09	2.86	0.29
Aggregate Base Delivery Truck	56	Paved	58.5	30	0.003	0.001	10.91	2.68	0.16	0.04
Worker Commute	6	Paved	58	30	0.003	0.001	1.16	0.28	0.02	0.00
Worker Commute	6	Unpaved	1.5	30	1.102	0.110	9.92	0.99	0.00	0.00
<b>Offsite Total</b>							<b>292.21</b>	<b>31.60</b>	<b>4.23</b>	<b>0.46</b>
<b>Total</b>							<b>431.22</b>	<b>45.50</b>	<b>6.32</b>	<b>0.67</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Asphaltic Paving VOC Emissions**

Area Paved (acre/day) <sup>a</sup>	Emission Factor (lb/acre) <sup>b</sup>	VOC (lb/day) <sup>c</sup>
0.29	2.62	0.7

<sup>a</sup> Based on 372,400 sq. ft. of area paved in 30 days

<sup>b</sup> From CalEEMod User's Guide

<sup>c</sup> Emissions [lb/day] = Emission factor [lb/acre] x Area paved [acre/day]



**Table 19**  
**Substation Construction Emissions - Initial Build Out**  
**Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.06	0.01	0.00	0.00	0.00	9.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	8.81	0.88	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>8.81</b>	<b>0.88</b>	<b>9.4</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.69	0.43	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>3.70</b>	<b>0.43</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.65</b>	<b>0.07</b>	<b>0.00</b>	<b>12.52</b>	<b>1.31</b>	<b>91.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>0.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 19**  
**Substation Construction Emissions - Initial Build Out**  
**Survey**

None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Survey Truck	2	15	N/A	4
<b>Offsite</b>				
Worker Commute	2	15	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Survey Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.06	0.01	0.00	0.00	0.00	9.24	0.00	0.00	9.37
<b>Onsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.24</b>	<b>0.00</b>	<b>0.00</b>	<b>9.37</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78

**Table 19**  
**Substation Construction Emissions - Initial Build Out**  
**Survey**

<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>
<b>Total</b>	<b>0.02</b>	<b>0.65</b>	<b>0.07</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>90.09</b>	<b>0.01</b>	<b>0.00</b>	<b>91.15</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>
<b>Offsite</b>										
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.68</b>	<b>0.00</b>	<b>0.00</b>	<b>0.68</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Survey Truck	2	Unpaved	4	15	1.102	0.110	8.81	0.88	0.07	0.01
<b>Onsite Total</b>							<b>8.81</b>	<b>0.88</b>	<b>0.07</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	15	0.003	0.001	0.39	0.09	0.00	0.00
Worker Commute	2	Unpaved	1.5	15	1.102	0.110	3.31	0.33	0.00	0.00
<b>Offsite Total</b>							<b>3.69</b>	<b>0.43</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>							<b>12.51</b>	<b>1.31</b>	<b>0.07</b>	<b>0.01</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00

**Table 19**  
**Substation Construction Emissions - Initial Build Out**  
**Survey**

Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 20**  
**Substation Construction Emissions - Full Build Out**  
**Civil**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	7.66	39.98	50.00	0.16	2.20	2.03	16,475.6
Onsite Motor Vehicle Exhaust	0.01	0.08	0.27	0.00	0.01	0.00	61.9
Onsite Motor Vehicle Fugitive PM	--	--	--	--	40.78	4.08	
Earthwork Fugitive PM	--	--	--	--	9.70	1.47	
<b>Onsite Total</b>	<b>7.67</b>	<b>40.06</b>	<b>50.27</b>	<b>0.16</b>	<b>52.69</b>	<b>7.58</b>	<b>16537.6</b>
Offsite Motor Vehicle Exhaust	0.42	6.18	11.01	0.03	0.43	0.20	2,889.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	70.66	7.79	
<b>Offsite Total</b>	<b>0.42</b>	<b>6.18</b>	<b>11.01</b>	<b>0.03</b>	<b>71.09</b>	<b>7.98</b>	<b>2889.0</b>
<b>Total</b>	<b>8.09</b>	<b>46.24</b>	<b>61.28</b>	<b>0.19</b>	<b>123.78</b>	<b>15.56</b>	<b>19426.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.77	4.00	5.00	0.02	0.22	0.20	1,647.6
Onsite Motor Vehicle Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	6.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	3.91	0.39	
Earthwork Fugitive PM	--	--	--	--	0.97	0.15	
<b>Onsite Total</b>	<b>0.77</b>	<b>4.00</b>	<b>5.03</b>	<b>0.02</b>	<b>5.10</b>	<b>0.74</b>	<b>1653.6</b>
Offsite Motor Vehicle Exhaust	0.04	0.62	1.10	0.00	0.04	0.02	288.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	4.59	0.53	
<b>Offsite Total</b>	<b>0.04</b>	<b>0.62</b>	<b>1.10</b>	<b>0.00</b>	<b>4.63</b>	<b>0.55</b>	<b>288.9</b>
<b>Total</b>	<b>0.81</b>	<b>4.62</b>	<b>6.13</b>	<b>0.02</b>	<b>9.73</b>	<b>1.29</b>	<b>1942.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	4	200	10
Excavator	85	2	200	4
Skip Loader	350	2	200	4
Forklift	100	3	200	4
Trencher	75	2	200	4
Bobcat	75	4	200	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Excavator	85	0.083	0.507	0.529	0.001	0.039	0.036	73.557	0.008	0.002	Excavators
Skip Loader	350	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
Trencher	75	0.108	0.456	0.665	0.001	0.055	0.051	64.837	0.010	0.002	Trenchers

**Table 20**  
**Substation Construction Emissions - Full Build Out**  
**Civil**

Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders
--------	----	-------	-------	-------	-------	-------	-------	--------	-------	-------	--------------------

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	4.13	22.02	24.98	0.12	0.74	0.68	12441.16	0.37	0.32	12,548.9
Excavator	0.67	4.05	4.23	0.01	0.32	0.29	588.46	0.06	0.02	594.5
Skip Loader	1.27	4.47	10.05	0.02	0.36	0.33	1894.36	0.11	0.05	1,912.0
Forklift	0.37	2.55	2.53	0.00	0.18	0.16	374.36	0.03	0.01	378.1
Trencher	0.86	3.65	5.32	0.01	0.44	0.41	518.70	0.08	0.01	524.6
Bobcat	0.35	3.23	2.89	0.01	0.17	0.15	512.68	0.03	0.01	517.5
<b>Total</b>	<b>7.66</b>	<b>39.98</b>	<b>50.00</b>	<b>0.16</b>	<b>2.20</b>	<b>2.03</b>	<b>16329.72</b>	<b>0.69</b>	<b>0.42</b>	<b>16475.63</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.41	2.20	2.50	0.01	0.07	0.07	1244.12	0.04	0.03	1,254.9
Excavator	0.07	0.41	0.42	0.00	0.03	0.03	58.85	0.01	0.00	59.4
Skip Loader	0.13	0.45	1.00	0.00	0.04	0.03	189.44	0.01	0.00	191.2
Forklift	0.04	0.26	0.25	0.00	0.02	0.02	37.44	0.00	0.00	37.8
Trencher	0.09	0.36	0.53	0.00	0.04	0.04	51.87	0.01	0.00	52.5
Bobcat	0.04	0.32	0.29	0.00	0.02	0.02	51.27	0.00	0.00	51.8
<b>Total</b>	<b>0.77</b>	<b>4.00</b>	<b>5.00</b>	<b>0.02</b>	<b>0.22</b>	<b>0.20</b>	<b>1632.97</b>	<b>0.07</b>	<b>0.04</b>	<b>1647.56</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Dump Truck	4	200	N/A	1
Concrete Truck	10	200	N/A	1
Water Truck	2	200	N/A	1
Tool Truck	2	200	N/A	1
Inspection Services	2	45	N/A	1
<b>Offsite</b>				
Water Truck	2	200	N/A	18
Concrete Truck	10	200	N/A	60
Worker Commute	15	200	N/A	58

<sup>a</sup> Concrete trucks based on 20,000 CY over 200 days and 10 CY/truck

**Table 20**  
**Substation Construction Emissions - Full Build Out**  
**Civil**

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.01	0.07	0.00	0.00	0.00	14.16	0.00	0.00	14.31
Concrete Truck	0.00	0.03	0.17	0.00	0.01	0.00	35.40	0.00	0.00	35.78
Water Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Tool Truck	0.00	0.02	0.00	0.00	0.00	0.00	2.31	0.00	0.00	2.34
Inspection Services	0.00	0.02	0.00	0.00	0.00	0.00	2.31	0.00	0.00	2.34
<b>Onsite Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.27</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>61.26</b>	<b>0.00</b>	<b>0.00</b>	<b>61.93</b>
<b>Offsite</b>										
Water Truck	0.02	0.10	0.60	0.00	0.02	0.01	127.45	0.00	0.00	128.81
Concrete Truck	0.25	1.71	9.94	0.02	0.33	0.18	2124.15	0.01	0.07	2146.85
Worker Commute	0.15	4.37	0.48	0.01	0.09	0.00	606.44	0.04	0.02	613.36
<b>Offsite Total</b>	<b>0.42</b>	<b>6.18</b>	<b>11.01</b>	<b>0.03</b>	<b>0.43</b>	<b>0.20</b>	<b>2858.04</b>	<b>0.05</b>	<b>0.10</b>	<b>2889.02</b>
<b>Total</b>	<b>0.43</b>	<b>6.26</b>	<b>11.28</b>	<b>0.03</b>	<b>0.44</b>	<b>0.20</b>	<b>2919.30</b>	<b>0.05</b>	<b>0.10</b>	<b>2950.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.42	0.00	0.00	1.43
Concrete Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.72
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.23
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.95</b>	<b>0.00</b>	<b>0.00</b>	<b>6.01</b>

**Table 20**  
**Substation Construction Emissions - Full Build Out**  
**Civil**

<b>Offsite</b>										
Water Truck	0.00	0.01	0.06	0.00	0.00	0.00	12.74	0.00	0.00	12.88
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.02	0.44	0.05	0.00	0.01	0.00	60.64	0.00	0.00	61.34
<b>Offsite Total</b>	<b>0.04</b>	<b>0.62</b>	<b>1.10</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>285.80</b>	<b>0.00</b>	<b>0.01</b>	<b>288.90</b>
<b>Total</b>	<b>0.04</b>	<b>0.62</b>	<b>1.13</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>291.75</b>	<b>0.01</b>	<b>0.01</b>	<b>294.91</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Dump Truck	4	Unpaved	1	200	2.273	0.227	9.09	0.91	0.91	0.09
Concrete Truck	10	Unpaved	1	200	2.273	0.227	22.73	2.27	2.27	0.23
Water Truck	2	Unpaved	1	200	2.273	0.227	4.55	0.45	0.45	0.05
Tool Truck	2	Unpaved	1	200	1.102	0.110	2.20	0.22	0.22	0.02
Inspection Services	2	Unpaved	1	45	1.102	0.110	2.20	0.22	0.05	0.00
<b>Onsite Total</b>							<b>40.78</b>	<b>4.08</b>	<b>3.91</b>	<b>0.39</b>
<b>Offsite</b>										
Water Truck	2	Unpaved	1.5	200	2.273	0.227	6.82	0.68	0.68	0.07
Water Truck	2	Paved	16.5	200	0.003	0.001	0.11	0.03	0.01	0.00
Concrete Truck	10	Unpaved	1.5	200	2.273	0.227	34.10	3.41	3.41	0.34
Concrete Truck	10	Paved	58.5	200	0.003	0.001	1.95	0.48	0.19	0.05
Worker Commute	15	Paved	58	200	0.003	0.001	2.90	0.71	0.29	0.07
Worker Commute	15	Unpaved	1.5	200	1.102	0.110	24.79	2.48	0.00	0.00
<b>Offsite Total</b>							<b>70.66</b>	<b>7.79</b>	<b>4.59</b>	<b>0.53</b>
<b>Total</b>							<b>111.43</b>	<b>11.86</b>	<b>8.49</b>	<b>0.92</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	146	29150	6.65E-02	1.01E-02	9.70	1.47	0.97	0.15
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>9.70</b>	<b>1.47</b>	<b>0.97</b>	<b>0.15</b>

<sup>a</sup> From Table 115



**Table 20**  
**Substation Construction Emissions - Full Build Out**  
**Civil**

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on handling 29,150 CY over 200 days

**Table 21  
Substation Construction Emissions - Full Build Out  
Electrical**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.86	12.87	22.36	0.04	1.15	1.05	3,271.3
Onsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	5.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	8.40	0.84	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.86</b>	<b>12.89</b>	<b>22.36</b>	<b>0.04</b>	<b>9.55</b>	<b>1.89</b>	<b>3276.6</b>
Offsite Motor Vehicle Exhaust	0.16	4.66	0.51	0.01	0.10	0.00	654.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	29.53	3.40	
<b>Offsite Total</b>	<b>0.16</b>	<b>4.66</b>	<b>0.51</b>	<b>0.01</b>	<b>29.63</b>	<b>3.41</b>	<b>654.3</b>
<b>Total</b>	<b>3.03</b>	<b>17.55</b>	<b>22.87</b>	<b>0.04</b>	<b>39.18</b>	<b>5.30</b>	<b>3930.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.18	0.94	1.31	0.00	0.08	0.08	180.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.69	0.07	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.18</b>	<b>0.94</b>	<b>1.31</b>	<b>0.00</b>	<b>0.77</b>	<b>0.14</b>	<b>180.7</b>
Offsite Motor Vehicle Exhaust	0.02	0.47	0.05	0.00	0.01	0.00	65.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.31	0.08	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.05</b>	<b>0.00</b>	<b>0.32</b>	<b>0.08</b>	<b>65.4</b>
<b>Total</b>	<b>0.19</b>	<b>1.41</b>	<b>1.36</b>	<b>0.00</b>	<b>1.09</b>	<b>0.22</b>	<b>246.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Reach Manlift	75	2	200	4
Manlift	75	4	200	4
14 Ton Crane	250	2	20	4
150 Ton Crane	300	1	20	4
5 Ton Crane	250	1	200	3
Forklift	100	4	200	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Reach Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
14 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
150 Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
5 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

**Table 21  
Substation Construction Emissions - Full Build Out  
Electrical**

Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
----------	-----	-------	-------	-------	-------	-------	-------	--------	-------	-------	-----------

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Reach Manlift	0.33	1.88	2.42	0.00	0.18	0.16	304.30	0.03	0.01	307.4
Manlift	0.66	3.77	4.84	0.01	0.35	0.32	608.60	0.06	0.02	614.8
14 Ton Crane	0.70	2.11	6.02	0.01	0.21	0.19	896.47	0.06	0.02	905.0
150 Ton Crane	0.53	1.77	4.28	0.01	0.15	0.14	719.76	0.05	0.02	726.6
5 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
Forklift	0.37	2.55	2.53	0.00	0.18	0.16	374.36	0.03	0.01	378.1
<b>Total</b>	<b>2.86</b>	<b>12.87</b>	<b>22.36</b>	<b>0.04</b>	<b>1.15</b>	<b>1.05</b>	<b>3239.66</b>	<b>0.26</b>	<b>0.08</b>	<b>3271.27</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Reach Manlift	0.03	0.19	0.24	0.00	0.02	0.02	30.43	0.00	0.00	30.7
Manlift	0.07	0.38	0.48	0.00	0.04	0.03	60.86	0.01	0.00	61.5
14 Ton Crane	0.01	0.02	0.06	0.00	0.00	0.00	8.96	0.00	0.00	9.1
150 Ton Crane	0.01	0.02	0.04	0.00	0.00	0.00	7.20	0.00	0.00	7.3
5 Ton Crane	0.03	0.08	0.23	0.00	0.01	0.01	33.62	0.00	0.00	33.9
Forklift	0.04	0.26	0.25	0.00	0.02	0.02	37.44	0.00	0.00	37.8
<b>Total</b>	<b>0.18</b>	<b>0.94</b>	<b>1.31</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>178.51</b>	<b>0.02</b>	<b>0.00</b>	<b>180.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Pick-up Truck	2	200	N/A	1
Crew Truck	2	200	N/A	1
Inspection Services	2	60	N/A	1
<b>Offsite</b>				
Worker Commute	16	200	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										

**Table 21  
Substation Construction Emissions - Full Build Out  
Electrical**

Pick-up Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
Inspection Services	0.00	0.02	0.00	0.00	0.00	0.00	2.31	0.00	0.00	2.34
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.30</b>	<b>0.00</b>	<b>0.00</b>	<b>5.37</b>
<b>Offsite</b>										
Worker Commute	0.16	4.66	0.51	0.01	0.10	0.00	646.87	0.04	0.02	654.25
<b>Offsite Total</b>	<b>0.16</b>	<b>4.66</b>	<b>0.51</b>	<b>0.01</b>	<b>0.10</b>	<b>0.00</b>	<b>646.87</b>	<b>0.04</b>	<b>0.02</b>	<b>654.25</b>
<b>Total</b>	<b>0.16</b>	<b>4.68</b>	<b>0.51</b>	<b>0.01</b>	<b>0.10</b>	<b>0.00</b>	<b>652.17</b>	<b>0.04</b>	<b>0.02</b>	<b>659.63</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.15
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.15
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>
<b>Offsite</b>										
Worker Commute	0.02	0.47	0.05	0.00	0.01	0.00	64.69	0.00	0.00	65.43
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.05</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>64.69</b>	<b>0.00</b>	<b>0.00</b>	<b>65.43</b>
<b>Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.05</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>65.06</b>	<b>0.00</b>	<b>0.00</b>	<b>65.80</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Pick-up Truck	2	Unpaved	1	200	1.790	0.179	3.58	0.36	0.36	0.04

**Table 21  
Substation Construction Emissions - Full Build Out  
Electrical**

Crew Truck	2	Unpaved	1	200	1.311	0.131	2.62	0.26	0.26	0.03
Inspection Services	2	Unpaved	1	60	1.102	0.110	2.20	0.22	0.07	0.01
<b>Onsite Total</b>							<b>8.40</b>	<b>0.84</b>	<b>0.69</b>	<b>0.07</b>
<b>Offsite</b>										
Worker Commute	16	Paved	58	200	0.003	0.001	3.09	0.76	0.31	0.08
Worker Commute	16	Unpaved	1.5	200	1.102	0.110	26.44	2.64	0.00	0.00
<b>Offsite Total</b>							<b>29.53</b>	<b>3.40</b>	<b>0.31</b>	<b>0.08</b>
<b>Total</b>							<b>37.94</b>	<b>4.24</b>	<b>1.00</b>	<b>0.14</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 22**  
**Substation Construction Emissions - Full Build Out**  
**Wiring**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	2.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	4.06	0.41	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>4.06</b>	<b>0.41</b>	<b>2.3</b>
Offsite Motor Vehicle Exhaust	0.08	2.33	0.25	0.00	0.05	0.00	327.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	14.77	1.70	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>14.81</b>	<b>1.70</b>	<b>327.1</b>
<b>Total</b>	<b>0.08</b>	<b>2.35</b>	<b>0.26</b>	<b>0.00</b>	<b>18.88</b>	<b>2.11</b>	<b>329.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.16	0.02	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>	<b>0.02</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.09	0.01	0.00	0.00	0.00	13.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.06	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.06</b>	<b>0.02</b>	<b>13.1</b>
<b>Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.23</b>	<b>0.03</b>	<b>13.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 22**  
**Substation Construction Emissions - Full Build Out**  
**Wiring**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Wiring Truck	1	80	N/A	1
Pick-up Truck	1	80	N/A	1
<b>Offsite</b>				
Worker Commute	8	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Wiring Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Pick-up Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Pick-up Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.31</b>	<b>0.00</b>	<b>0.00</b>	<b>2.34</b>
<b>Offsite</b>										
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>323.43</b>	<b>0.02</b>	<b>0.01</b>	<b>327.13</b>
<b>Total</b>	<b>0.08</b>	<b>2.35</b>	<b>0.26</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>325.74</b>	<b>0.02</b>	<b>0.01</b>	<b>329.47</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 22**  
**Substation Construction Emissions - Full Build Out**  
**Wiring**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.09</b>
<b>Offsite</b>										
Worker Commute	0.00	0.09	0.01	0.00	0.00	0.00	12.94	0.00	0.00	13.09
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.94</b>	<b>0.00</b>	<b>0.00</b>	<b>13.09</b>
<b>Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>13.03</b>	<b>0.00</b>	<b>0.00</b>	<b>13.18</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Wiring Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
Pick-up Truck	1	Unpaved	1	80	1.790	0.179	1.79	0.18	0.07	0.01
<b>Onsite Total</b>							<b>4.06</b>	<b>0.41</b>	<b>0.16</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	8	Paved	58	80	0.003	0.001	1.54	0.38	0.06	0.02
Worker Commute	8	Unpaved	1.5	80	1.102	0.110	13.22	1.32	0.00	0.00
<b>Offsite Total</b>							<b>14.77</b>	<b>1.70</b>	<b>0.06</b>	<b>0.02</b>
<b>Total</b>							<b>18.83</b>	<b>2.11</b>	<b>0.22</b>	<b>0.03</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 23  
Substation Construction Emissions - Full Build Out  
Control Room**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.79	2.66	6.43	0.01	0.23	0.21	1,089.8
Onsite Motor Vehicle Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	5.5
Onsite Motor Vehicle Fugitive PM	--	--	--	--	6.82	0.68	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.79</b>	<b>2.67</b>	<b>6.45</b>	<b>0.01</b>	<b>7.05</b>	<b>0.90</b>	<b>1095.3</b>
Offsite Motor Vehicle Exhaust	0.10	2.91	0.32	0.00	0.06	0.00	408.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	18.46	2.13	
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>18.52</b>	<b>2.13</b>	<b>408.9</b>
<b>Total</b>	<b>0.90</b>	<b>5.58</b>	<b>6.76</b>	<b>0.02</b>	<b>25.57</b>	<b>3.02</b>	<b>1504.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.05	0.00	0.00	0.00	8.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.27	0.03	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.00</b>	<b>0.27</b>	<b>0.03</b>	<b>8.4</b>
Offsite Motor Vehicle Exhaust	0.00	0.12	0.01	0.00	0.00	0.00	16.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.08	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>16.4</b>
<b>Total</b>	<b>0.01</b>	<b>0.14</b>	<b>0.06</b>	<b>0.00</b>	<b>0.35</b>	<b>0.05</b>	<b>24.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30 Ton Crane	350	1	15	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30 Ton Crane	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30 Ton Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
<b>Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.43</b>	<b>0.01</b>	<b>0.23</b>	<b>0.21</b>	<b>1079.64</b>	<b>0.07</b>	<b>0.03</b>	<b>1089.84</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 23  
Substation Construction Emissions - Full Build Out  
Control Room**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30 Ton Crane	0.01	0.02	0.05	0.00	0.00	0.00	8.10	0.00	0.00	8.2
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.10</b>	<b>0.00</b>	<b>0.00</b>	<b>8.17</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	80	N/A	1
Stake Truck	1	80	N/A	1
Wiring Truck	1	80	N/A	1
<b>Offsite</b>				
Worker Commute	10	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Wiring Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Stake Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.44</b>	<b>0.00</b>	<b>0.00</b>	<b>5.51</b>
<b>Offsite</b>										
Worker Commute	0.10	2.91	0.32	0.00	0.06	0.00	404.29	0.02	0.01	408.91
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>404.29</b>	<b>0.02</b>	<b>0.01</b>	<b>408.91</b>
<b>Total</b>	<b>0.10</b>	<b>2.92</b>	<b>0.34</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>409.74</b>	<b>0.02</b>	<b>0.01</b>	<b>414.41</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 23**  
**Substation Construction Emissions - Full Build Out**  
**Control Room**

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>
<b>Offsite</b>										
Worker Commute	0.00	0.12	0.01	0.00	0.00	0.00	16.17	0.00	0.00	16.36
<b>Offsite Total</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>16.17</b>	<b>0.00</b>	<b>0.00</b>	<b>16.36</b>
<b>Total</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>16.39</b>	<b>0.00</b>	<b>0.00</b>	<b>16.58</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
Stake Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
Wiring Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
<b>Onsite Total</b>							<b>6.82</b>	<b>0.68</b>	<b>0.27</b>	<b>0.03</b>
<b>Offsite</b>										
Worker Commute	10	Paved	58	80	0.003	0.001	1.93	0.47	0.08	0.02
Worker Commute	10	Unpaved	1.5	80	1.102	0.110	16.53	1.65	0.00	0.00
<b>Offsite Total</b>							<b>18.46</b>	<b>2.13</b>	<b>0.08</b>	<b>0.02</b>
<b>Total</b>							<b>25.28</b>	<b>2.81</b>	<b>0.35</b>	<b>0.05</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00

**Table 23**  
**Substation Construction Emissions - Full Build Out**  
**Control Room**

<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	--	--	--	--	--	-------------	-------------	-------------	-------------

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 24  
Substation Construction Emissions - Full Build Out  
Maintenance**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	2.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	3.93	0.39	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.93</b>	<b>0.39</b>	<b>2.3</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.38	0.85	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>7.41</b>	<b>0.85</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>11.34</b>	<b>1.24</b>	<b>165.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.20	0.02	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.20</b>	<b>0.02</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.06	0.01	0.00	0.00	0.00	8.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.04	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>8.2</b>
<b>Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.24</b>	<b>0.03</b>	<b>8.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 24  
Substation Construction Emissions - Full Build Out  
Maintenance**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Foreman Truck	1	100	N/A	1
Crew Truck	2	100	N/A	1
<b>Offsite</b>				
Worker Commute	4	100	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Foreman Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.25</b>	<b>0.00</b>	<b>0.00</b>	<b>2.27</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 24**  
**Substation Construction Emissions - Full Build Out**  
**Maintenance**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.08
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>
<b>Offsite</b>										
Worker Commute	0.00	0.06	0.01	0.00	0.00	0.00	8.09	0.00	0.00	8.18
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.09</b>	<b>0.00</b>	<b>0.00</b>	<b>8.18</b>
<b>Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.20</b>	<b>0.00</b>	<b>0.00</b>	<b>8.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Foreman Truck	1	Unpaved	1	100	1.311	0.131	1.31	0.13	0.07	0.01
Crew Truck	2	Unpaved	1	100	1.311	0.131	2.62	0.26	0.13	0.01
<b>Onsite Total</b>							<b>3.93</b>	<b>0.39</b>	<b>0.20</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	100	0.003	0.001	0.77	0.19	0.04	0.01
Worker Commute	4	Unpaved	1.5	100	1.102	0.110	6.61	0.66	0.00	0.00
<b>Offsite Total</b>							<b>7.38</b>	<b>0.85</b>	<b>0.04</b>	<b>0.01</b>
<b>Total</b>							<b>11.31</b>	<b>1.24</b>	<b>0.24</b>	<b>0.03</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 25**  
**Substation Construction Emissions - Full Build Out**  
**Asphalting**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	5.70	21.43	50.61	0.08	1.90	1.75	7,304.9
Onsite Motor Vehicle Exhaust	0.01	0.08	0.43	0.00	0.01	0.01	94.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	59.45	5.94	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
Asphaltic Paving VOC	0.3	--	--	--	--	--	--
<b>Onsite Total</b>	<b>6.05</b>	<b>21.51</b>	<b>51.05</b>	<b>0.08</b>	<b>61.37</b>	<b>7.70</b>	<b>7399.15</b>
Offsite Motor Vehicle Exhaust	0.64	5.68	23.05	0.05	0.79	0.42	5,183.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	93.97	10.22	
<b>Offsite Total</b>	<b>0.64</b>	<b>5.68</b>	<b>23.05</b>	<b>0.05</b>	<b>94.76</b>	<b>10.63</b>	<b>5183.1</b>
<b>Total</b>	<b>6.70</b>	<b>27.19</b>	<b>74.09</b>	<b>0.13</b>	<b>156.12</b>	<b>18.34</b>	<b>12582.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.32	0.76	0.00	0.03	0.03	109.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	1.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.89	0.09	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
Asphaltic Paving VOC	0.01	--	--	--	--	--	--
<b>Onsite Total</b>	<b>0.09</b>	<b>0.32</b>	<b>0.76</b>	<b>0.00</b>	<b>0.92</b>	<b>0.12</b>	<b>110.6</b>
Offsite Motor Vehicle Exhaust	0.01	0.09	0.35	0.00	0.01	0.01	77.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.26	0.14	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.09</b>	<b>0.35</b>	<b>0.00</b>	<b>1.27</b>	<b>0.14</b>	<b>77.7</b>
<b>Total</b>	<b>0.10</b>	<b>0.41</b>	<b>1.11</b>	<b>0.00</b>	<b>2.19</b>	<b>0.26</b>	<b>188.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Paving Roller	200	2	30	10
Asphalt Paver	250	1	30	10
Tractor	150	1	30	10
Asphalt Curb Machine	250	1	30	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Paving Roller	200	0.104	0.346	0.995	0.002	0.033	0.031	152.952	0.009	0.004	Rollers
Asphalt Paver	250	0.176	0.537	1.546	0.002	0.059	0.054	194.197	0.016	0.005	Pavers
Tractor	150	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Asphalt Curb Machine	250	0.108	0.330	0.969	0.001	0.036	0.033	122.182	0.010	0.003	Paving Equipment

<sup>a</sup> From Table 111



**Table 25**  
**Substation Construction Emissions - Full Build Out**  
**Asphalting**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Paving Roller	2.08	6.92	19.89	0.03	0.67	0.61	3059.05	0.19	0.08	3,087.6
Asphalt Paver	1.76	5.37	15.46	0.02	0.59	0.54	1941.97	0.16	0.05	1,961.0
Tractor	0.79	5.84	5.57	0.01	0.29	0.27	1012.96	0.07	0.03	1,022.7
Asphalt Curb Machine	1.08	3.30	9.69	0.01	0.36	0.33	1221.82	0.10	0.03	1,233.7
<b>Total</b>	<b>5.70</b>	<b>21.43</b>	<b>50.61</b>	<b>0.08</b>	<b>1.90</b>	<b>1.75</b>	<b>7235.80</b>	<b>0.51</b>	<b>0.19</b>	<b>7304.95</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Paving Roller	0.03	0.10	0.30	0.00	0.01	0.01	45.89	0.00	0.00	46.3
Asphalt Paver	0.03	0.08	0.23	0.00	0.01	0.01	29.13	0.00	0.00	29.4
Tractor	0.01	0.09	0.08	0.00	0.00	0.00	15.19	0.00	0.00	15.3
Asphalt Curb Machine	0.02	0.05	0.15	0.00	0.01	0.00	18.33	0.00	0.00	18.5
<b>Total</b>	<b>0.09</b>	<b>0.32</b>	<b>0.76</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>108.54</b>	<b>0.01</b>	<b>0.00</b>	<b>109.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Stake Truck	1	30	N/A	1
Dump Truck	1	30	N/A	1
Crew Truck	2	30	N/A	1
Asphalt Delivery Truck	8	30	N/A	1
Aggregate Base Delivery Truck	15	30	N/A	1
<b>Offsite</b>				
Asphalt Delivery Truck	8	30	N/A	60
Aggregate Base Delivery Truck	15	30	N/A	60
Worker Commute	6	30	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 1,710 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 3,250 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Crew Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 25**  
**Substation Construction Emissions - Full Build Out**  
**Asphalting**

Asphalt Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Aggregate Base Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
<b>Offsite</b>										
Asphalt Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Aggregate Base Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Stake Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Crew Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Asphalt Delivery Truck	0.00	0.02	0.13	0.00	0.00	0.00	28.32	0.00	0.00	28.62
Aggregate Base Delivery Truck	0.01	0.04	0.25	0.00	0.01	0.00	53.10	0.00	0.00	53.67
<b>Onsite Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.43</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>93.20</b>	<b>0.00</b>	<b>0.00</b>	<b>94.20</b>
<b>Offsite</b>										
Asphalt Delivery Truck	0.20	1.37	7.95	0.02	0.26	0.14	1699.32	0.01	0.06	1717.48
Aggregate Base Delivery Truck	0.38	2.56	14.91	0.03	0.49	0.27	3186.23	0.02	0.11	3220.27
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.64</b>	<b>5.68</b>	<b>23.05</b>	<b>0.05</b>	<b>0.79</b>	<b>0.42</b>	<b>5128.13</b>	<b>0.04</b>	<b>0.17</b>	<b>5183.09</b>
<b>Total</b>	<b>0.66</b>	<b>5.76</b>	<b>23.48</b>	<b>0.05</b>	<b>0.80</b>	<b>0.43</b>	<b>5221.33</b>	<b>0.04</b>	<b>0.18</b>	<b>5277.30</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Aggregate Base Delivery Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.81
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.97</b>	<b>0.00</b>	<b>0.00</b>	<b>0.98</b>
<b>Offsite</b>										
Asphalt Delivery Truck	0.00	0.02	0.12	0.00	0.00	0.00	25.49	0.00	0.00	25.76
Aggregate Base Delivery Truck	0.01	0.04	0.22	0.00	0.01	0.00	47.79	0.00	0.00	48.30
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	3.64	0.00	0.00	3.68
<b>Offsite Total</b>	<b>0.01</b>	<b>0.09</b>	<b>0.35</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>76.92</b>	<b>0.00</b>	<b>0.00</b>	<b>77.75</b>
<b>Total</b>	<b>0.01</b>	<b>0.09</b>	<b>0.35</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>77.90</b>	<b>0.00</b>	<b>0.00</b>	<b>78.73</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 25**  
**Substation Construction Emissions - Full Build Out**  
**Asphalting**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Stake Truck	1	Unpaved	1	30	2.273	0.227	2.27	0.23	0.03	0.00
Dump Truck	1	Unpaved	1	30	2.273	0.227	2.27	0.23	0.03	0.00
Crew Truck	2	Unpaved	1	30	1.311	0.131	2.62	0.26	0.04	0.00
Asphalt Delivery Truck	8	Unpaved	1	30	2.273	0.227	18.18	1.82	0.27	0.03
Aggregate Base Delivery Truck	15	Unpaved	1	30	2.273	0.227	34.10	3.41	0.51	0.05
<b>Onsite Total</b>							<b>59.45</b>	<b>5.94</b>	<b>0.89</b>	<b>0.09</b>
<b>Offsite</b>										
Asphalt Delivery Truck	8	Unpaved	1.5	30	2.273	0.227	27.28	2.73	0.41	0.04
Asphalt Delivery Truck	8	Paved	58.5	30	0.003	0.001	1.56	0.38	0.02	0.01
Aggregate Base Delivery Truck	15	Unpaved	1.5	30	2.273	0.227	51.14	5.11	0.77	0.08
Aggregate Base Delivery Truck	15	Paved	58.5	30	0.003	0.001	2.92	0.72	0.04	0.01
Worker Commute	6	Paved	58	30	0.003	0.001	1.16	0.28	0.02	0.00
Worker Commute	6	Unpaved	1.5	30	1.102	0.110	9.92	0.99	0.00	0.00
<b>Offsite Total</b>							<b>93.97</b>	<b>10.22</b>	<b>1.26</b>	<b>0.14</b>
<b>Total</b>							<b>153.42</b>	<b>16.16</b>	<b>2.15</b>	<b>0.23</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Asphaltic Paving VOC Emissions**

Area Paved (acre/day) <sup>a</sup>	Emission Factor (lb/acre) <sup>b</sup>	VOC (lb/day) <sup>c</sup>
0.13	2.62	0.3

<sup>a</sup> Based on 169,000 sq. ft. of area paved in 30 days

<sup>b</sup> From CalEEMod User's Guide

<sup>c</sup> Emissions [lb/day] = Emission factor [lb/acre] x Area paved [acre/day]

**Table 26  
Substation Construction Emissions - Full Build Out  
Transformer Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.37	9.52	19.27	0.03	0.81	0.75	2,892.7
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	2.7
Onsite Motor Vehicle Fugitive PM	--	--	--	--	4.89	0.49	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.37</b>	<b>9.53</b>	<b>19.27</b>	<b>0.03</b>	<b>5.71</b>	<b>1.24</b>	<b>2895.4</b>
Offsite Motor Vehicle Exhaust	0.06	1.75	0.19	0.00	0.04	0.00	245.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	11.07	1.28	
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>11.11</b>	<b>1.28</b>	<b>245.3</b>
<b>Total</b>	<b>2.44</b>	<b>11.28</b>	<b>19.46</b>	<b>0.04</b>	<b>16.82</b>	<b>2.52</b>	<b>3140.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.10	0.45	0.82	0.00	0.04	0.03	122.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.29	0.03	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.10</b>	<b>0.45</b>	<b>0.82</b>	<b>0.00</b>	<b>0.33</b>	<b>0.06</b>	<b>122.8</b>
Offsite Motor Vehicle Exhaust	0.00	0.10	0.01	0.00	0.00	0.00	14.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>14.7</b>
<b>Total</b>	<b>0.11</b>	<b>0.56</b>	<b>0.83</b>	<b>0.00</b>	<b>0.40</b>	<b>0.08</b>	<b>137.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Forklift	100	2	120	10
50 Ton Crane	200	2	75	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
50 Ton Crane	200	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Forklift	0.62	4.26	4.22	0.01	0.30	0.27	623.94	0.06	0.02	630.2
50 Ton Crane	1.75	5.26	15.05	0.03	0.52	0.48	2241.16	0.16	0.06	2,262.5

**Table 26**  
**Substation Construction Emissions - Full Build Out**  
**Transformer Assembly**

<b>Total</b>	<b>2.37</b>	<b>9.52</b>	<b>19.27</b>	<b>0.03</b>	<b>0.81</b>	<b>0.75</b>	<b>2865.10</b>	<b>0.21</b>	<b>0.07</b>	<b>2892.72</b>
--------------	-------------	-------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Forklift	0.04	0.26	0.25	0.00	0.02	0.02	37.44	0.00	0.00	37.8
50 Ton Crane	0.07	0.20	0.56	0.00	0.02	0.02	84.04	0.01	0.00	84.8
<b>Total</b>	<b>0.10</b>	<b>0.45</b>	<b>0.82</b>	<b>0.00</b>	<b>0.04</b>	<b>0.03</b>	<b>121.48</b>	<b>0.01</b>	<b>0.00</b>	<b>122.66</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	120	N/A	1
Crew Truck	2	120	N/A	1
<b>Offsite</b>				
Worker Commute	6	120	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.65</b>	<b>0.00</b>	<b>0.00</b>	<b>2.69</b>
<b>Offsite</b>										
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>242.58</b>	<b>0.01</b>	<b>0.01</b>	<b>245.34</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>245.23</b>	<b>0.01</b>	<b>0.01</b>	<b>248.03</b>

**Table 26  
Substation Construction Emissions - Full Build Out  
Transformer Assembly**

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>
<b>Offsite</b>										
Worker Commute	0.00	0.10	0.01	0.00	0.00	0.00	14.55	0.00	0.00	14.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.55</b>	<b>0.00</b>	<b>0.00</b>	<b>14.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.11</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.71</b>	<b>0.00</b>	<b>0.00</b>	<b>14.88</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Unpaved	1	120	2.273	0.227	2.27	0.23	0.14	0.01
Crew Truck	2	Unpaved	1	120	1.311	0.131	2.62	0.26	0.16	0.02
<b>Onsite Total</b>							<b>4.89</b>	<b>0.49</b>	<b>0.29</b>	<b>0.03</b>
<b>Offsite</b>										
Worker Commute	6	Paved	58	120	0.003	0.001	1.16	0.28	0.07	0.02
Worker Commute	6	Unpaved	1.5	120	1.102	0.110	9.92	0.99	0.00	0.00
<b>Offsite Total</b>							<b>11.07</b>	<b>1.28</b>	<b>0.07</b>	<b>0.02</b>
<b>Total</b>							<b>15.97</b>	<b>1.77</b>	<b>0.36</b>	<b>0.05</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 26**  
**Substation Construction Emissions - Full Build Out**  
**Transformer Assembly**

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 27  
Substation Construction Emissions - Full Build Out  
Testing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	1.31	0.13	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.31</b>	<b>0.13</b>	<b>0.8</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.38	0.85	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>7.41</b>	<b>0.85</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>8.72</b>	<b>0.98</b>	<b>164.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.12	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.10	0.01	0.00	0.00	0.00	14.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>14.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.19</b>	<b>0.03</b>	<b>14.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions



**Table 27**  
**Substation Construction Emissions - Full Build Out**  
**Testing**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Crew Truck	1	180	N/A	1
<b>Offsite</b>				
Worker Commute	4	180	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.75</b>	<b>0.00</b>	<b>0.00</b>	<b>0.76</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.47</b>	<b>0.01</b>	<b>0.01</b>	<b>164.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										

**Table 27**  
**Substation Construction Emissions - Full Build Out**  
**Testing**

Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>
<b>Offsite</b>										
Worker Commute	0.00	0.10	0.01	0.00	0.00	0.00	14.55	0.00	0.00	14.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.55</b>	<b>0.00</b>	<b>0.00</b>	<b>14.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.62</b>	<b>0.00</b>	<b>0.00</b>	<b>14.79</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Crew Truck	1	Unpaved	1	180	1.311	0.131	1.31	0.13	0.12	0.01
<b>Onsite Total</b>							<b>1.31</b>	<b>0.13</b>	<b>0.12</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	180	0.003	0.001	0.77	0.19	0.07	0.02
Worker Commute	4	Unpaved	1.5	180	1.102	0.110	6.61	0.66	0.00	0.00
<b>Offsite Total</b>							<b>7.38</b>	<b>0.85</b>	<b>0.07</b>	<b>0.02</b>
<b>Total</b>							<b>8.69</b>	<b>0.98</b>	<b>0.19</b>	<b>0.03</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 28  
Substation Construction Emissions - Full Build Out  
Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.06	0.01	0.00	0.00	0.00	9.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	8.81	0.88	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>8.81</b>	<b>0.88</b>	<b>9.4</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.69	0.43	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>3.70</b>	<b>0.43</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.65</b>	<b>0.07</b>	<b>0.00</b>	<b>12.52</b>	<b>1.31</b>	<b>91.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.22	0.02	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>	<b>0.02</b>	<b>0.2</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	2.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>2.0</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.23</b>	<b>0.02</b>	<b>2.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 28**  
**Substation Construction Emissions - Full Build Out**  
**Survey**

None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Survey Truck	2	50	N/A	4
<b>Offsite</b>				
Worker Commute	2	50	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Survey Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.06	0.01	0.00	0.00	0.00	9.24	0.00	0.00	9.37
<b>Onsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.24</b>	<b>0.00</b>	<b>0.00</b>	<b>9.37</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78

**Table 28  
Substation Construction Emissions - Full Build Out  
Survey**

<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>
<b>Total</b>	<b>0.02</b>	<b>0.65</b>	<b>0.07</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>90.09</b>	<b>0.01</b>	<b>0.00</b>	<b>91.15</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.23
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.23</b>	<b>0.00</b>	<b>0.00</b>	<b>0.23</b>
<b>Offsite</b>										
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	2.02	0.00	0.00	2.04
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.02</b>	<b>0.00</b>	<b>0.00</b>	<b>2.04</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.25</b>	<b>0.00</b>	<b>0.00</b>	<b>2.28</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Survey Truck	2	Unpaved	4	50	1.102	0.110	8.81	0.88	0.22	0.02
<b>Onsite Total</b>							<b>8.81</b>	<b>0.88</b>	<b>0.22</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	50	0.003	0.001	0.39	0.09	0.01	0.00
Worker Commute	2	Unpaved	1.5	50	1.102	0.110	3.31	0.33	0.00	0.00
<b>Offsite Total</b>							<b>3.69</b>	<b>0.43</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>12.51</b>	<b>1.31</b>	<b>0.23</b>	<b>0.02</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00

**Table 28**  
**Substation Construction Emissions - Full Build Out**  
**Survey**

Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 29**  
**Modifications to Coolwater Switchyard**  
**Civil**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.63	19.06	24.20	0.06	1.34	1.23	5,454.6
Onsite Motor Vehicle Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	8.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.63</b>	<b>19.07</b>	<b>24.23</b>	<b>0.06</b>	<b>1.35</b>	<b>1.24</b>	<b>5462.9</b>
Offsite Motor Vehicle Exhaust	0.12	2.60	1.84	0.01	0.10	0.03	670.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.86	0.46	
<b>Offsite Total</b>	<b>0.12</b>	<b>2.60</b>	<b>1.84</b>	<b>0.01</b>	<b>1.96</b>	<b>0.49</b>	<b>670.6</b>
<b>Total</b>	<b>3.75</b>	<b>21.67</b>	<b>26.08</b>	<b>0.06</b>	<b>3.31</b>	<b>1.72</b>	<b>6133.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.11	0.57	0.73	0.00	0.04	0.04	163.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.11</b>	<b>0.57</b>	<b>0.73</b>	<b>0.00</b>	<b>0.04</b>	<b>0.04</b>	<b>163.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.06	0.00	0.00	0.00	20.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.06	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.06</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>20.1</b>
<b>Total</b>	<b>0.11</b>	<b>0.65</b>	<b>0.78</b>	<b>0.00</b>	<b>0.10</b>	<b>0.05</b>	<b>184.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	1	60	8
Excavator	85	2	60	8
Skip Loader	350	1	60	5
Forklift	100	1	60	4
Trencher	75	1	60	4
Bobcat	75	1	60	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Excavator	85	0.083	0.507	0.529	0.001	0.039	0.036	73.557	0.008	0.002	Excavators
Skip Loader	350	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
Trencher	75	0.108	0.456	0.665	0.001	0.055	0.051	64.837	0.010	0.002	Trenchers

**Table 29**  
**Modifications to Coolwater Switchyard**  
**Civil**

Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders
--------	----	-------	-------	-------	-------	-------	-------	--------	-------	-------	--------------------

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	0.83	4.40	5.00	0.02	0.15	0.14	2488.23	0.07	0.06	2,509.8
Excavator	1.33	8.10	8.46	0.01	0.63	0.58	1176.91	0.12	0.03	1,189.0
Skip Loader	0.80	2.79	6.28	0.01	0.22	0.21	1183.98	0.07	0.03	1,195.0
Forklift	0.12	0.85	0.84	0.00	0.06	0.05	124.79	0.01	0.00	126.0
Trencher	0.43	1.82	2.66	0.00	0.22	0.20	259.35	0.04	0.01	262.3
Bobcat	0.12	1.08	0.96	0.00	0.06	0.05	170.89	0.01	0.00	172.5
<b>Total</b>	<b>3.63</b>	<b>19.06</b>	<b>24.20</b>	<b>0.06</b>	<b>1.34</b>	<b>1.23</b>	<b>5404.15</b>	<b>0.33</b>	<b>0.14</b>	<b>5454.62</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.02	0.13	0.15	0.00	0.00	0.00	74.65	0.00	0.00	75.3
Excavator	0.04	0.24	0.25	0.00	0.02	0.02	35.31	0.00	0.00	35.7
Skip Loader	0.02	0.08	0.19	0.00	0.01	0.01	35.52	0.00	0.00	35.9
Forklift	0.00	0.03	0.03	0.00	0.00	0.00	3.74	0.00	0.00	3.8
Trencher	0.01	0.05	0.08	0.00	0.01	0.01	7.78	0.00	0.00	7.9
Bobcat	0.00	0.03	0.03	0.00	0.00	0.00	5.13	0.00	0.00	5.2
<b>Total</b>	<b>0.11</b>	<b>0.57</b>	<b>0.73</b>	<b>0.00</b>	<b>0.04</b>	<b>0.04</b>	<b>162.12</b>	<b>0.01</b>	<b>0.00</b>	<b>163.64</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Dump Truck	1	60	N/A	0.5
Concrete Truck	1	60	N/A	0.5
Water Truck	2	60	N/A	0.5
Tool Truck	1	60	N/A	0.5
Inspection Services	1	20	N/A	0.5
<b>Offsite</b>				
Water Truck	2	60	N/A	18
Concrete Truck	1	60	N/A	60
Worker Commute	8	60	N/A	58

<sup>a</sup> Concrete trucks based on 20,000 CY over 200 days and 10 CY/truck



**Table 29**  
**Modifications to Coolwater Switchyard**  
**Civil**

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.24</b>	<b>0.00</b>	<b>0.00</b>	<b>8.33</b>
<b>Offsite</b>										
Water Truck	0.02	0.10	0.60	0.00	0.02	0.01	127.45	0.00	0.00	128.81
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.12</b>	<b>2.60</b>	<b>1.84</b>	<b>0.01</b>	<b>0.10</b>	<b>0.03</b>	<b>663.30</b>	<b>0.02</b>	<b>0.02</b>	<b>670.62</b>
<b>Total</b>	<b>0.12</b>	<b>2.62</b>	<b>1.88</b>	<b>0.01</b>	<b>0.10</b>	<b>0.03</b>	<b>671.53</b>	<b>0.02</b>	<b>0.02</b>	<b>678.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.24</b>	<b>0.00</b>	<b>0.00</b>	<b>0.24</b>

**Table 29**  
**Modifications to Coolwater Switchyard**  
**Civil**

<b>Offsite</b>										
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.82	0.00	0.00	3.86
Concrete Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.37	0.00	0.00	6.44
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.70	0.00	0.00	9.81
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>19.90</b>	<b>0.00</b>	<b>0.00</b>	<b>20.12</b>
<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>20.13</b>	<b>0.00</b>	<b>0.00</b>	<b>20.36</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Dump Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Concrete Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Water Truck	2	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Tool Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Inspection Services	1	Paved	0.5	20	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Water Truck	2	Paved	17.5	60	0.003	0.001	0.12	0.03	0.00	0.00
Concrete Truck	1	Paved	59.5	60	0.003	0.001	0.20	0.05	0.01	0.00
Worker Commute	8	Paved	58	60	0.003	0.001	1.54	0.38	0.05	0.01
<b>Offsite Total</b>							<b>1.86</b>	<b>0.46</b>	<b>0.06</b>	<b>0.01</b>
<b>Total</b>							<b>1.87</b>	<b>0.46</b>	<b>0.06</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 30  
Modifications to Coolwater Switchyard  
Electrical**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.77	7.52	13.97	0.02	0.68	0.63	2,076.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	2.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.77</b>	<b>7.53</b>	<b>13.97</b>	<b>0.02</b>	<b>0.69</b>	<b>0.63</b>	<b>2078.3</b>
Offsite Motor Vehicle Exhaust	0.08	2.33	0.25	0.00	0.05	0.00	327.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.54	0.38	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>1.59</b>	<b>0.38</b>	<b>327.1</b>
<b>Total</b>	<b>1.85</b>	<b>9.86</b>	<b>14.23</b>	<b>0.03</b>	<b>2.29</b>	<b>1.01</b>	<b>2405.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.06	0.26	0.49	0.00	0.02	0.02	72.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.06</b>	<b>0.26</b>	<b>0.49</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>72.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.01	0.00	0.00	0.00	11.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>11.4</b>
<b>Total</b>	<b>0.06</b>	<b>0.34</b>	<b>0.50</b>	<b>0.00</b>	<b>0.08</b>	<b>0.04</b>	<b>84.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Reach Manlift	75	1	70	5
Manlift	75	2	70	5
14 Ton Crane	250	1	70	3
150 Ton Crane	300	1	70	4
5 Ton Crane	250	1	70	3
Forklift	100	1	70	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Reach Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
14 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
150 Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
5 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

**Table 30  
Modifications to Coolwater Switchyard  
Electrical**

Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
----------	-----	-------	-------	-------	-------	-------	-------	--------	-------	-------	-----------

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Reach Manlift	0.21	1.18	1.51	0.00	0.11	0.10	190.19	0.02	0.00	192.1
Manlift	0.42	2.35	3.03	0.00	0.22	0.20	380.38	0.04	0.01	384.3
14 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
150 Ton Crane	0.53	1.77	4.28	0.01	0.15	0.14	719.76	0.05	0.02	726.6
5 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
Forklift	0.09	0.64	0.63	0.00	0.04	0.04	93.59	0.01	0.00	94.5
<b>Total</b>	<b>1.77</b>	<b>7.52</b>	<b>13.97</b>	<b>0.02</b>	<b>0.68</b>	<b>0.63</b>	<b>2056.26</b>	<b>0.16</b>	<b>0.05</b>	<b>2076.22</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Reach Manlift	0.01	0.04	0.05	0.00	0.00	0.00	6.66	0.00	0.00	6.7
Manlift	0.01	0.08	0.11	0.00	0.01	0.01	13.31	0.00	0.00	13.4
14 Ton Crane	0.01	0.03	0.08	0.00	0.00	0.00	11.77	0.00	0.00	11.9
150 Ton Crane	0.02	0.06	0.15	0.00	0.01	0.00	25.19	0.00	0.00	25.4
5 Ton Crane	0.01	0.03	0.08	0.00	0.00	0.00	11.77	0.00	0.00	11.9
Forklift	0.00	0.02	0.02	0.00	0.00	0.00	3.28	0.00	0.00	3.3
<b>Total</b>	<b>0.06</b>	<b>0.26</b>	<b>0.49</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>71.97</b>	<b>0.01</b>	<b>0.00</b>	<b>72.67</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Pick-up Truck	2	70	N/A	0.5
Crew Truck	2	70	N/A	0.5
Inspection Services	1	20	N/A	0.5
<b>Offsite</b>				
Worker Commute	8	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										

**Table 30**  
**Modifications to Coolwater Switchyard**  
**Electrical**

Pick-up Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.07</b>	<b>0.00</b>	<b>0.00</b>	<b>2.10</b>
<b>Offsite</b>										
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>323.43</b>	<b>0.02</b>	<b>0.01</b>	<b>327.13</b>
<b>Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.26</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>325.51</b>	<b>0.02</b>	<b>0.01</b>	<b>329.23</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.06</b>
<b>Offsite</b>										
Worker Commute	0.00	0.08	0.01	0.00	0.00	0.00	11.32	0.00	0.00	11.45
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>11.32</b>	<b>0.00</b>	<b>0.00</b>	<b>11.45</b>
<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>11.38</b>	<b>0.00</b>	<b>0.00</b>	<b>11.51</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Pick-up Truck	2	Paved	0.5	70	0.003	0.001	0.00	0.00	0.00	0.00

**Table 30  
Modifications to Coolwater Switchyard  
Electrical**

Crew Truck	2	Paved	0.5	70	0.003	0.001	0.00	0.00	0.00	0.00
Inspection Services	1	Paved	0.5	20	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	8	Paved	58	70	0.003	0.001	1.54	0.38	0.05	0.01
<b>Offsite Total</b>							<b>1.54</b>	<b>0.38</b>	<b>0.05</b>	<b>0.01</b>
<b>Total</b>							<b>1.55</b>	<b>0.38</b>	<b>0.05</b>	<b>0.01</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 31  
Modifications to Coolwater Switchyard  
Wiring**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.2</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.39	0.09	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>83.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	2.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>2.5</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>2.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 31  
Modifications to Coolwater Switchyard  
Wiring**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Wiring Truck	1	60	N/A	0.5
Pick-up Truck	1	60	N/A	0.5
<b>Offsite</b>				
Worker Commute	2	60	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Wiring Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Pick-up Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.15</b>	<b>0.00</b>	<b>0.00</b>	<b>1.17</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>82.01</b>	<b>0.01</b>	<b>0.00</b>	<b>82.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**



**Table 31  
Modifications to Coolwater Switchyard  
Wiring**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>
<b>Offsite</b>										
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.43	0.00	0.00	2.45
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.43</b>	<b>0.00</b>	<b>0.00</b>	<b>2.45</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.46</b>	<b>0.00</b>	<b>0.00</b>	<b>2.49</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Wiring Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Pick-up Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	60	0.003	0.001	0.39	0.09	0.01	0.00
<b>Offsite Total</b>							<b>0.39</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>0.39</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 32**  
**Modifications to Coolwater Switchyard**  
**MEER**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.79	2.66	6.43	0.01	0.23	0.21	1,089.8
Onsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.44</b>	<b>0.01</b>	<b>0.24</b>	<b>0.21</b>	<b>1092.6</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.84</b>	<b>3.83</b>	<b>6.56</b>	<b>0.01</b>	<b>1.03</b>	<b>0.41</b>	<b>1256.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	5.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.6</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	6.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>6.5</b>
<b>Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.04</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>12.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30 Ton Crane	350	1	10	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30 Ton Crane	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30 Ton Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
<b>Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.43</b>	<b>0.01</b>	<b>0.23</b>	<b>0.21</b>	<b>1079.64</b>	<b>0.07</b>	<b>0.03</b>	<b>1089.84</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 32**  
**Modifications to Coolwater Switchyard**  
**MEER**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30 Ton Crane	0.00	0.01	0.03	0.00	0.00	0.00	5.40	0.00	0.00	5.4
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.40</b>	<b>0.00</b>	<b>0.00</b>	<b>5.45</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	80	N/A	0.5
Stake Truck	1	80	N/A	0.5
Wiring Truck	1	80	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Wiring Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.72</b>	<b>0.00</b>	<b>0.00</b>	<b>2.75</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.14</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>164.44</b>	<b>0.01</b>	<b>0.01</b>	<b>166.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 32  
Modifications to Coolwater Switchyard  
MEER**

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>
<b>Offsite</b>										
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.47	0.00	0.00	6.54
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.47</b>	<b>0.00</b>	<b>0.00</b>	<b>6.54</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.58</b>	<b>0.00</b>	<b>0.00</b>	<b>6.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
Stake Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
Wiring Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	80	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>0.78</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 32**  
**Modifications to Coolwater Switchyard**  
**MEER**

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 33  
Modifications to Coolwater Switchyard  
Maintenance**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	1.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>1.1</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>164.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 33  
Modifications to Coolwater Switchyard  
Maintenance**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Foreman Truck	1	40	N/A	0.5
Crew Truck	2	40	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	40	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Foreman Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.12</b>	<b>0.00</b>	<b>0.00</b>	<b>1.14</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.84</b>	<b>0.01</b>	<b>0.01</b>	<b>164.70</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 33**  
**Modifications to Coolwater Switchyard**  
**Maintenance**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>	<b>0.00</b>	<b>0.00</b>	<b>3.27</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.26</b>	<b>0.00</b>	<b>0.00</b>	<b>3.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Foreman Truck	1	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
Crew Truck	2	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	40	0.003	0.001	0.77	0.19	0.02	0.00
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>0.78</b>	<b>0.19</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 34  
Modifications to Coolwater Switchyard  
Testing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.4</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.04	0.00	0.00	0.00	0.00	5.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 34  
Modifications to Coolwater Switchyard  
Testing**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Crew Truck	1	70	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>	<b>0.00</b>	<b>0.00</b>	<b>0.38</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.09</b>	<b>0.01</b>	<b>0.01</b>	<b>163.94</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										

**Table 34  
Modifications to Coolwater Switchyard  
Testing**

Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.66</b>	<b>0.00</b>	<b>0.00</b>	<b>5.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.67</b>	<b>0.00</b>	<b>0.00</b>	<b>5.74</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Crew Truck	1	Paved	0.5	70	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	70	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 35  
Modifications to Coolwater Switchyard  
Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.2</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.39	0.09	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>83.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>

**Table 35  
Modifications to Coolwater Switchyard  
Survey**

None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Survey Truck	2	15	N/A	0.5
<b>Offsite</b>				
Worker Commute	2	15	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Survey Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.15</b>	<b>0.00</b>	<b>0.00</b>	<b>1.17</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78

**Table 35  
Modifications to Coolwater Switchyard  
Survey**

<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>82.01</b>	<b>0.01</b>	<b>0.00</b>	<b>82.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.62</b>	<b>0.00</b>	<b>0.00</b>	<b>0.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Survey Truck	2	Paved	0.5	15	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	15	0.003	0.001	0.39	0.09	0.00	0.00
<b>Offsite Total</b>							<b>0.39</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>							<b>0.39</b>	<b>0.10</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00

**Table 35**  
**Modifications to Coolwater Switchyard**  
**Survey**

Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 36**  
**Modifications to Lugo Substation**  
**Civil**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.83	20.16	25.45	0.06	1.38	1.27	6,082.1
Onsite Motor Vehicle Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	8.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.83</b>	<b>20.17</b>	<b>25.48</b>	<b>0.06</b>	<b>1.39</b>	<b>1.27</b>	<b>6090.4</b>
Offsite Motor Vehicle Exhaust	0.14	3.19	1.91	0.01	0.11	0.03	752.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2.25	0.55	
<b>Offsite Total</b>	<b>0.14</b>	<b>3.19</b>	<b>1.91</b>	<b>0.01</b>	<b>2.36</b>	<b>0.58</b>	<b>752.4</b>
<b>Total</b>	<b>3.98</b>	<b>23.36</b>	<b>27.39</b>	<b>0.07</b>	<b>3.75</b>	<b>1.85</b>	<b>6842.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.19	1.01	1.27	0.00	0.07	0.06	304.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.19</b>	<b>1.01</b>	<b>1.27</b>	<b>0.00</b>	<b>0.07</b>	<b>0.06</b>	<b>304.5</b>
Offsite Motor Vehicle Exhaust	0.01	0.16	0.10	0.00	0.01	0.00	37.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.11	0.03	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.10</b>	<b>0.00</b>	<b>0.12</b>	<b>0.03</b>	<b>37.6</b>
<b>Total</b>	<b>0.20</b>	<b>1.17</b>	<b>1.37</b>	<b>0.00</b>	<b>0.19</b>	<b>0.09</b>	<b>342.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	1	100	10
Excavator	85	2	100	8
Skip Loader	350	1	100	5
Forklift	100	1	100	4
Trencher	75	1	100	4
Bobcat	75	1	100	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Excavator	85	0.083	0.507	0.529	0.001	0.039	0.036	73.557	0.008	0.002	Excavators
Skip Loader	350	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
Trencher	75	0.108	0.456	0.665	0.001	0.055	0.051	64.837	0.010	0.002	Trenchers



**Table 36**  
**Modifications to Lugo Substation**  
**Civil**

Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders
--------	----	-------	-------	-------	-------	-------	-------	--------	-------	-------	--------------------

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	1.03	5.51	6.25	0.03	0.19	0.17	3110.29	0.09	0.08	3,137.2
Excavator	1.33	8.10	8.46	0.01	0.63	0.58	1176.91	0.12	0.03	1,189.0
Skip Loader	0.80	2.79	6.28	0.01	0.22	0.21	1183.98	0.07	0.03	1,195.0
Forklift	0.12	0.85	0.84	0.00	0.06	0.05	124.79	0.01	0.00	126.0
Trencher	0.43	1.82	2.66	0.00	0.22	0.20	259.35	0.04	0.01	262.3
Bobcat	0.12	1.08	0.96	0.00	0.06	0.05	170.89	0.01	0.00	172.5
<b>Total</b>	<b>3.83</b>	<b>20.16</b>	<b>25.45</b>	<b>0.06</b>	<b>1.38</b>	<b>1.27</b>	<b>6026.21</b>	<b>0.35</b>	<b>0.16</b>	<b>6082.06</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.05	0.28	0.31	0.00	0.01	0.01	155.51	0.00	0.00	156.9
Excavator	0.07	0.41	0.42	0.00	0.03	0.03	58.85	0.01	0.00	59.4
Skip Loader	0.04	0.14	0.31	0.00	0.01	0.01	59.20	0.00	0.00	59.8
Forklift	0.01	0.04	0.04	0.00	0.00	0.00	6.24	0.00	0.00	6.3
Trencher	0.02	0.09	0.13	0.00	0.01	0.01	12.97	0.00	0.00	13.1
Bobcat	0.01	0.05	0.05	0.00	0.00	0.00	8.54	0.00	0.00	8.6
<b>Total</b>	<b>0.19</b>	<b>1.01</b>	<b>1.27</b>	<b>0.00</b>	<b>0.07</b>	<b>0.06</b>	<b>301.31</b>	<b>0.02</b>	<b>0.01</b>	<b>304.10</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Dump Truck	1	100	N/A	0.5
Concrete Truck	1	100	N/A	0.5
Water Truck	2	100	N/A	0.5
Tool Truck	1	100	N/A	0.5
Inspection Services	1	20	N/A	0.5
<b>Offsite</b>				
Water Truck	2	100	N/A	18
Concrete Truck	1	100	N/A	60
Worker Commute	10	100	N/A	58

<sup>a</sup> Concrete trucks based on 20,000 CY over 200 days and 10 CY/truck

**Table 36**  
**Modifications to Lugo Substation**  
**Civil**

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.24</b>	<b>0.00</b>	<b>0.00</b>	<b>8.33</b>
<b>Offsite</b>										
Water Truck	0.02	0.10	0.60	0.00	0.02	0.01	127.45	0.00	0.00	128.81
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.10	2.91	0.32	0.00	0.06	0.00	404.29	0.02	0.01	408.91
<b>Offsite Total</b>	<b>0.14</b>	<b>3.19</b>	<b>1.91</b>	<b>0.01</b>	<b>0.11</b>	<b>0.03</b>	<b>744.16</b>	<b>0.03</b>	<b>0.02</b>	<b>752.40</b>
<b>Total</b>	<b>0.14</b>	<b>3.20</b>	<b>1.94</b>	<b>0.01</b>	<b>0.11</b>	<b>0.03</b>	<b>752.39</b>	<b>0.03</b>	<b>0.03</b>	<b>760.73</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.18
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.39</b>	<b>0.00</b>	<b>0.00</b>	<b>0.39</b>

**Table 36**  
**Modifications to Lugo Substation**  
**Civil**

<b>Offsite</b>										
Water Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.37	0.00	0.00	6.44
Concrete Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.01	0.15	0.02	0.00	0.00	0.00	20.21	0.00	0.00	20.45
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.10</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>37.21</b>	<b>0.00</b>	<b>0.00</b>	<b>37.62</b>
<b>Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.10</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>37.60</b>	<b>0.00</b>	<b>0.00</b>	<b>38.01</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Dump Truck	1	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Concrete Truck	1	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Water Truck	2	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Tool Truck	1	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Inspection Services	1	Paved	0.5	20	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Water Truck	2	Paved	17.5	100	0.003	0.001	0.12	0.03	0.01	0.00
Concrete Truck	1	Paved	59.5	100	0.003	0.001	0.20	0.05	0.01	0.00
Worker Commute	10	Paved	58	100	0.003	0.001	1.93	0.47	0.10	0.02
<b>Offsite Total</b>							<b>2.25</b>	<b>0.55</b>	<b>0.11</b>	<b>0.03</b>
<b>Total</b>							<b>2.26</b>	<b>0.55</b>	<b>0.11</b>	<b>0.03</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 37**  
**Modifications to Lugo Substation**  
**Electrical**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.77	7.52	13.97	0.02	0.68	0.63	2,076.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	2.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.77</b>	<b>7.53</b>	<b>13.97</b>	<b>0.02</b>	<b>0.69</b>	<b>0.63</b>	<b>2078.3</b>
Offsite Motor Vehicle Exhaust	0.10	2.91	0.32	0.00	0.06	0.00	408.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.93	0.47	
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>1.99</b>	<b>0.48</b>	<b>408.9</b>
<b>Total</b>	<b>1.87</b>	<b>10.44</b>	<b>14.29</b>	<b>0.03</b>	<b>2.68</b>	<b>1.11</b>	<b>2487.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.38	0.70	0.00	0.03	0.03	103.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.09</b>	<b>0.38</b>	<b>0.70</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>103.9</b>
Offsite Motor Vehicle Exhaust	0.01	0.15	0.02	0.00	0.00	0.00	20.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.02	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.02</b>	<b>0.00</b>	<b>0.10</b>	<b>0.02</b>	<b>20.4</b>
<b>Total</b>	<b>0.09</b>	<b>0.52</b>	<b>0.71</b>	<b>0.00</b>	<b>0.13</b>	<b>0.06</b>	<b>124.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Reach Manlift	75	1	100	5
Manlift	75	2	100	5
14 Ton Crane	250	1	100	3
150 Ton Crane	300	1	100	4
5 Ton Crane	250	1	100	3
Forklift	100	1	100	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Reach Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
14 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
150 Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
5 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

**Table 37  
Modifications to Lugo Substation  
Electrical**

Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
----------	-----	-------	-------	-------	-------	-------	-------	--------	-------	-------	-----------

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Reach Manlift	0.21	1.18	1.51	0.00	0.11	0.10	190.19	0.02	0.00	192.1
Manlift	0.42	2.35	3.03	0.00	0.22	0.20	380.38	0.04	0.01	384.3
14 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
150 Ton Crane	0.53	1.77	4.28	0.01	0.15	0.14	719.76	0.05	0.02	726.6
5 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
Forklift	0.09	0.64	0.63	0.00	0.04	0.04	93.59	0.01	0.00	94.5
<b>Total</b>	<b>1.77</b>	<b>7.52</b>	<b>13.97</b>	<b>0.02</b>	<b>0.68</b>	<b>0.63</b>	<b>2056.26</b>	<b>0.16</b>	<b>0.05</b>	<b>2076.22</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Reach Manlift	0.01	0.06	0.08	0.00	0.01	0.01	9.51	0.00	0.00	9.6
Manlift	0.02	0.12	0.15	0.00	0.01	0.01	19.02	0.00	0.00	19.2
14 Ton Crane	0.01	0.04	0.11	0.00	0.00	0.00	16.81	0.00	0.00	17.0
150 Ton Crane	0.03	0.09	0.21	0.00	0.01	0.01	35.99	0.00	0.00	36.3
5 Ton Crane	0.01	0.04	0.11	0.00	0.00	0.00	16.81	0.00	0.00	17.0
Forklift	0.00	0.03	0.03	0.00	0.00	0.00	4.68	0.00	0.00	4.7
<b>Total</b>	<b>0.09</b>	<b>0.38</b>	<b>0.70</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>102.81</b>	<b>0.01</b>	<b>0.00</b>	<b>103.81</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Pick-up Truck	2	100	N/A	0.5
Crew Truck	2	100	N/A	0.5
Inspection Services	1	20	N/A	0.5
<b>Offsite</b>				
Worker Commute	10	100	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										

**Table 37  
Modifications to Lugo Substation  
Electrical**

Pick-up Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.07</b>	<b>0.00</b>	<b>0.00</b>	<b>2.10</b>
<b>Offsite</b>										
Worker Commute	0.10	2.91	0.32	0.00	0.06	0.00	404.29	0.02	0.01	408.91
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>404.29</b>	<b>0.02</b>	<b>0.01</b>	<b>408.91</b>
<b>Total</b>	<b>0.10</b>	<b>2.92</b>	<b>0.32</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>406.37</b>	<b>0.02</b>	<b>0.01</b>	<b>411.01</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>
<b>Offsite</b>										
Worker Commute	0.01	0.15	0.02	0.00	0.00	0.00	20.21	0.00	0.00	20.45
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>20.21</b>	<b>0.00</b>	<b>0.00</b>	<b>20.45</b>
<b>Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>20.30</b>	<b>0.00</b>	<b>0.00</b>	<b>20.53</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Pick-up Truck	2	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00

**Table 37  
Modifications to Lugo Substation  
Electrical**

Crew Truck	2	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Inspection Services	1	Paved	0.5	20	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	10	Paved	58	100	0.003	0.001	1.93	0.47	0.10	0.02
<b>Offsite Total</b>							<b>1.93</b>	<b>0.47</b>	<b>0.10</b>	<b>0.02</b>
<b>Total</b>							<b>1.94</b>	<b>0.48</b>	<b>0.10</b>	<b>0.02</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 38  
Modifications to Lugo Substation  
Wiring**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.2</b>
Offsite Motor Vehicle Exhaust	0.06	1.75	0.19	0.00	0.04	0.00	245.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.16	0.28	
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>1.19</b>	<b>0.29</b>	<b>245.3</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>1.20</b>	<b>0.29</b>	<b>246.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	7.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>7.4</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>7.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions



**Table 38**  
**Modifications to Lugo Substation**  
**Wiring**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Wiring Truck	1	60	N/A	0.5
Pick-up Truck	1	60	N/A	0.5
<b>Offsite</b>				
Worker Commute	6	60	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Wiring Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Pick-up Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.15</b>	<b>0.00</b>	<b>0.00</b>	<b>1.17</b>
<b>Offsite</b>										
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>242.58</b>	<b>0.01</b>	<b>0.01</b>	<b>245.34</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>243.73</b>	<b>0.01</b>	<b>0.01</b>	<b>246.52</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 38**  
**Modifications to Lugo Substation**  
**Wiring**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>
<b>Offsite</b>										
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	7.28	0.00	0.00	7.36
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.28</b>	<b>0.00</b>	<b>0.00</b>	<b>7.36</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.31</b>	<b>0.00</b>	<b>0.00</b>	<b>7.40</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Wiring Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Pick-up Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	6	Paved	58	60	0.003	0.001	1.16	0.28	0.03	0.01
<b>Offsite Total</b>							<b>1.16</b>	<b>0.28</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>1.16</b>	<b>0.29</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 39**  
**Modifications to Lugo Substation**  
**Control Room**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.79	2.66	6.43	0.01	0.23	0.21	1,089.8
Onsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.44</b>	<b>0.01</b>	<b>0.24</b>	<b>0.21</b>	<b>1092.6</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.84</b>	<b>3.83</b>	<b>6.56</b>	<b>0.01</b>	<b>1.03</b>	<b>0.41</b>	<b>1256.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.05	0.00	0.00	0.00	8.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	6.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>6.5</b>
<b>Total</b>	<b>0.01</b>	<b>0.07</b>	<b>0.05</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>14.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30 Ton Crane	350	1	15	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30 Ton Crane	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30 Ton Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
<b>Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.43</b>	<b>0.01</b>	<b>0.23</b>	<b>0.21</b>	<b>1079.64</b>	<b>0.07</b>	<b>0.03</b>	<b>1089.84</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 39**  
**Modifications to Lugo Substation**  
**Control Room**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30 Ton Crane	0.01	0.02	0.05	0.00	0.00	0.00	8.10	0.00	0.00	8.2
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.10</b>	<b>0.00</b>	<b>0.00</b>	<b>8.17</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Carry-all Truck	1	80	N/A	0.5
Stake Truck	1	80	N/A	0.5
Wiring Truck	1	80	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Wiring Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.72</b>	<b>0.00</b>	<b>0.00</b>	<b>2.75</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.14</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>164.44</b>	<b>0.01</b>	<b>0.01</b>	<b>166.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 39  
Modifications to Lugo Substation  
Control Room**

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>
<b>Offsite</b>										
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.47	0.00	0.00	6.54
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.47</b>	<b>0.00</b>	<b>0.00</b>	<b>6.54</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.58</b>	<b>0.00</b>	<b>0.00</b>	<b>6.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
Stake Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
Wiring Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	80	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>0.78</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 39**  
**Modifications to Lugo Substation**  
**Control Room**

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 40  
Modifications to Lugo Substation  
Maintenance**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	1.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>1.1</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>164.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 40**  
**Modifications to Lugo Substation**  
**Maintenance**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Foreman Truck	1	40	N/A	0.5
Crew Truck	2	40	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	40	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Foreman Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.12</b>	<b>0.00</b>	<b>0.00</b>	<b>1.14</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.84</b>	<b>0.01</b>	<b>0.01</b>	<b>164.70</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**



**Table 40**  
**Modifications to Lugo Substation**  
**Maintenance**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>	<b>0.00</b>	<b>0.00</b>	<b>3.27</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.26</b>	<b>0.00</b>	<b>0.00</b>	<b>3.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Foreman Truck	1	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
Crew Truck	2	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	40	0.003	0.001	0.77	0.19	0.02	0.00
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>0.78</b>	<b>0.19</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 41  
Modifications to Lugo Substation  
Transformer Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.67	7.42	13.25	0.02	0.61	0.56	1,987.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.01	0.00	0.00	0.00	2.5
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.67</b>	<b>7.42</b>	<b>13.26</b>	<b>0.02</b>	<b>0.61</b>	<b>0.56</b>	<b>1990.3</b>
Offsite Motor Vehicle Exhaust	0.06	1.75	0.19	0.00	0.04	0.00	245.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.16	0.28	
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>1.19</b>	<b>0.29</b>	<b>245.3</b>
<b>Total</b>	<b>1.74</b>	<b>9.17</b>	<b>13.45</b>	<b>0.03</b>	<b>1.81</b>	<b>0.85</b>	<b>2235.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.08	0.37	0.59	0.00	0.03	0.03	88.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.08</b>	<b>0.37</b>	<b>0.59</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>88.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.10	0.01	0.00	0.00	0.00	14.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>14.7</b>
<b>Total</b>	<b>0.08</b>	<b>0.48</b>	<b>0.60</b>	<b>0.00</b>	<b>0.10</b>	<b>0.04</b>	<b>103.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Forklift	100	2	120	10
50 Ton Crane	200	2	75	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
50 Ton Crane	200	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 41  
Modifications to Lugo Substation  
Transformer Assembly**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Forklift	0.62	4.26	4.22	0.01	0.30	0.27	623.94	0.06	0.02	630.2
50 Ton Crane	1.05	3.16	9.03	0.02	0.31	0.29	1344.70	0.09	0.03	1,357.5
<b>Total</b>	<b>1.67</b>	<b>7.42</b>	<b>13.25</b>	<b>0.02</b>	<b>0.61</b>	<b>0.56</b>	<b>1968.64</b>	<b>0.15</b>	<b>0.05</b>	<b>1987.71</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Forklift	0.04	0.26	0.25	0.00	0.02	0.02	37.44	0.00	0.00	37.8
50 Ton Crane	0.04	0.12	0.34	0.00	0.01	0.01	50.43	0.00	0.00	50.9
<b>Total</b>	<b>0.08</b>	<b>0.37</b>	<b>0.59</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>87.86</b>	<b>0.01</b>	<b>0.00</b>	<b>88.72</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	120	N/A	0.5
Crew Truck	2	120	N/A	0.5
<b>Offsite</b>				
Worker Commute	6	120	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										

**Table 41  
Modifications to Lugo Substation  
Transformer Assembly**

Carry-all Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.52</b>	<b>0.00</b>	<b>0.00</b>	<b>2.55</b>
<b>Offsite</b>										
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>242.58</b>	<b>0.01</b>	<b>0.01</b>	<b>245.34</b>
<b>Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.20</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>245.09</b>	<b>0.01</b>	<b>0.01</b>	<b>247.89</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.05
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.15</b>	<b>0.00</b>	<b>0.00</b>	<b>0.15</b>
<b>Offsite</b>										
Worker Commute	0.00	0.10	0.01	0.00	0.00	0.00	14.55	0.00	0.00	14.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.55</b>	<b>0.00</b>	<b>0.00</b>	<b>14.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.71</b>	<b>0.00</b>	<b>0.00</b>	<b>14.87</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Paved	0.5	120	0.003	0.001	0.00	0.00	0.00	0.00
Crew Truck	2	Paved	0.5	120	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	6	Paved	58	120	0.003	0.001	1.16	0.28	0.07	0.02
<b>Offsite Total</b>							<b>1.16</b>	<b>0.28</b>	<b>0.07</b>	<b>0.02</b>
<b>Total</b>							<b>1.16</b>	<b>0.29</b>	<b>0.07</b>	<b>0.02</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 41**  
**Modifications to Lugo Substation**  
**Transformer Assembly**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 42  
Modifications to Lugo Substation  
Testing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.4</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.04	0.00	0.00	0.00	0.00	5.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 42  
Modifications to Lugo Substation  
Testing**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Crew Truck	1	70	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>	<b>0.00</b>	<b>0.00</b>	<b>0.38</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.09</b>	<b>0.01</b>	<b>0.01</b>	<b>163.94</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										

**Table 42**  
**Modifications to Lugo Substation**  
**Testing**

Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.66</b>	<b>0.00</b>	<b>0.00</b>	<b>5.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.67</b>	<b>0.00</b>	<b>0.00</b>	<b>5.74</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Crew Truck	1	Paved	0.5	70	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	70	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 43  
Modifications to Lugo Substation  
Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.2</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.39	0.09	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>83.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 43  
Modifications to Lugo Substation  
Survey**

None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Survey Truck	2	15	N/A	0.5
<b>Offsite</b>				
Worker Commute	2	15	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Survey Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.15</b>	<b>0.00</b>	<b>0.00</b>	<b>1.17</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78

**Table 43  
Modifications to Lugo Substation  
Survey**

<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>82.01</b>	<b>0.01</b>	<b>0.00</b>	<b>82.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.62</b>	<b>0.00</b>	<b>0.00</b>	<b>0.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Survey Truck	2	Paved	0.5	15	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	15	0.003	0.001	0.39	0.09	0.00	0.00
<b>Offsite Total</b>							<b>0.39</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>							<b>0.39</b>	<b>0.10</b>	<b>0.00</b>	<b>0.00</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00

**Table 43**  
**Modifications to Lugo Substation**  
**Survey**

Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 44  
Transmission and Subtransmission Construction Emissions  
Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.22	6.36	0.76	0.01	0.12	0.00	907.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	181.32	18.58	
<b>Offsite Total</b>	<b>0.22</b>	<b>6.36</b>	<b>0.76</b>	<b>0.01</b>	<b>181.44</b>	<b>18.59</b>	<b>907.1</b>
<b>Total</b>	<b>0.22</b>	<b>6.36</b>	<b>0.76</b>	<b>0.01</b>	<b>181.44</b>	<b>18.59</b>	<b>907.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.01	0.16	0.02	0.00	0.00	0.00	22.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	4.53	0.46	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.00</b>	<b>4.54</b>	<b>0.46</b>	<b>22.7</b>
<b>Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.00</b>	<b>4.54</b>	<b>0.46</b>	<b>22.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 44  
Transmission and Subtransmission Construction Emissions  
Survey**

None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	8	50	N/A	27
Worker Commute	16	50	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88

**Table 44  
Transmission and Subtransmission Construction Emissions  
Survey**

Worker Commute	0.16	4.66	0.51	0.01	0.10	0.00	646.87	0.04	0.02	654.25
<b>Offsite Total</b>	<b>0.22</b>	<b>6.36</b>	<b>0.76</b>	<b>0.01</b>	<b>0.12</b>	<b>0.00</b>	<b>896.24</b>	<b>0.05</b>	<b>0.03</b>	<b>907.13</b>
<b>Total</b>	<b>0.22</b>	<b>6.36</b>	<b>0.76</b>	<b>0.01</b>	<b>0.12</b>	<b>0.00</b>	<b>896.24</b>	<b>0.05</b>	<b>0.03</b>	<b>907.13</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	6.23	0.00	0.00	6.32
Worker Commute	0.00	0.12	0.01	0.00	0.00	0.00	16.17	0.00	0.00	16.36
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.41</b>	<b>0.00</b>	<b>0.00</b>	<b>22.68</b>
<b>Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.41</b>	<b>0.00</b>	<b>0.00</b>	<b>22.68</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	8	Unpaved	17	50	1.311	0.131	178.23	17.82	4.46	0.45
1-Ton Truck, 4x4	8	Paved	10	50						
Worker Commute	16	Paved	58	50	0.003	0.001	3.09	0.76	0.08	0.02
<b>Offsite Total</b>							<b>181.32</b>	<b>18.58</b>	<b>4.53</b>	<b>0.46</b>
<b>Total</b>							<b>181.32</b>	<b>18.58</b>	<b>4.53</b>	<b>0.46</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 44**  
**Transmission and Subtransmission Construction Emissions**  
**Survey**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 45  
Transmission and Subtransmission Construction Emissions  
Construction and Materials Yards**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.91	3.00	7.11	0.01	0.25	0.23	1,297.0
Onsite Motor Vehicle Exhaust	0.04	0.33	1.46	0.00	0.05	0.03	324.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.32	0.08	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.95</b>	<b>3.33</b>	<b>8.57</b>	<b>0.02</b>	<b>0.62</b>	<b>0.34</b>	<b>1621.8</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total/Yard</b>	<b>0.99</b>	<b>4.49</b>	<b>8.70</b>	<b>0.02</b>	<b>1.42</b>	<b>0.53</b>	<b>1785.4</b>
<b>Total for 8 Yards</b>	<b>7.89</b>	<b>35.93</b>	<b>69.59</b>	<b>0.15</b>	<b>11.37</b>	<b>4.22</b>	<b>14283.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.41	1.37	3.25	0.01	0.11	0.11	592.1
Onsite Motor Vehicle Exhaust	0.02	0.15	0.67	0.00	0.02	0.01	148.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.15	0.04	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.43</b>	<b>1.52</b>	<b>3.91</b>	<b>0.01</b>	<b>0.29</b>	<b>0.15</b>	<b>740.4</b>
Offsite Motor Vehicle Exhaust	0.02	0.53	0.06	0.00	0.01	0.00	74.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.35	0.09	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.53</b>	<b>0.06</b>	<b>0.00</b>	<b>0.36</b>	<b>0.09</b>	<b>74.7</b>
<b>Total/Yard</b>	<b>0.45</b>	<b>2.05</b>	<b>3.97</b>	<b>0.01</b>	<b>0.65</b>	<b>0.24</b>	<b>815.0</b>
<b>Total for 8 Yards</b>	<b>3.60</b>	<b>16.40</b>	<b>31.77</b>	<b>0.07</b>	<b>5.19</b>	<b>1.93</b>	<b>6520.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
R/T Forklift	200	1	913	5
Boom/Crane Truck	350	1	913	5

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
R/T Forklift	200	0.049	0.157	0.351	0.001	0.012	0.011	77.053	0.004	0.002	Forklifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Table 45  
Transmission and Subtransmission Construction Emissions  
Construction and Materials Yards**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
R/T Forklift	0.24	0.78	1.76	0.00	0.06	0.05	385.26	0.02	0.01	388.8
Boom/Crane Truck	0.66	2.21	5.36	0.01	0.19	0.18	899.70	0.06	0.02	908.2
<b>Total</b>	<b>0.91</b>	<b>3.00</b>	<b>7.11</b>	<b>0.01</b>	<b>0.25</b>	<b>0.23</b>	<b>1284.96</b>	<b>0.08</b>	<b>0.03</b>	<b>1297.03</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
R/T Forklift	0.11	0.36	0.80	0.00	0.03	0.02	175.87	0.01	0.00	177.5
Boom/Crane Truck	0.30	1.01	2.44	0.00	0.09	0.08	410.71	0.03	0.01	414.6
<b>Total</b>	<b>0.41</b>	<b>1.37</b>	<b>3.25</b>	<b>0.01</b>	<b>0.11</b>	<b>0.11</b>	<b>586.58</b>	<b>0.04</b>	<b>0.02</b>	<b>592.09</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh. <sup>a</sup>
<b>Onsite</b>				
1-Ton Truck, 4x4	1	913	4	10
Boom/Crane Truck	1	913	5	12.5
Water Truck	2	913	10	25
Jet A Fuel Truck	1	913	4	10
Truck, Semi Tractor	1	913	6	15
<b>Offsite</b>				
Worker Commute	4	913	N/A	58

<sup>a</sup> Onsite travel based on 25% use at 10 mph average speed

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Jet A Fuel Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 45  
Transmission and Subtransmission Construction Emissions  
Construction and Materials Yards**

Truck, Semi Tractor	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
1-Ton Truck, 4x4	0.00	0.08	0.01	0.00	0.00	0.00	11.55	0.00	0.00	11.71
Boom/Crane Truck	0.01	0.04	0.21	0.00	0.01	0.00	44.25	0.00	0.00	44.73
Water Truck	0.02	0.14	0.83	0.00	0.03	0.02	177.01	0.00	0.01	178.90
Jet A Fuel Truck	0.00	0.03	0.17	0.00	0.01	0.00	35.40	0.00	0.00	35.78
Truck, Semi Tractor	0.01	0.04	0.25	0.00	0.01	0.00	53.10	0.00	0.00	53.67
<b>Onsite Total</b>	<b>0.04</b>	<b>0.33</b>	<b>1.46</b>	<b>0.00</b>	<b>0.05</b>	<b>0.03</b>	<b>321.32</b>	<b>0.00</b>	<b>0.01</b>	<b>324.79</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.08</b>	<b>1.49</b>	<b>1.59</b>	<b>0.01</b>	<b>0.07</b>	<b>0.03</b>	<b>483.03</b>	<b>0.01</b>	<b>0.02</b>	<b>488.35</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
1-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	5.27	0.00	0.00	5.34
Boom/Crane Truck	0.00	0.02	0.09	0.00	0.00	0.00	20.20	0.00	0.00	20.42
Water Truck	0.01	0.06	0.38	0.00	0.01	0.01	80.81	0.00	0.00	81.67
Jet A Fuel Truck	0.00	0.01	0.08	0.00	0.00	0.00	16.16	0.00	0.00	16.33
Truck, Semi Tractor	0.00	0.02	0.11	0.00	0.00	0.00	24.24	0.00	0.00	24.50
<b>Onsite Total</b>	<b>0.02</b>	<b>0.15</b>	<b>0.67</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>146.68</b>	<b>0.00</b>	<b>0.01</b>	<b>148.27</b>
<b>Offsite</b>										
Worker Commute	0.02	0.53	0.06	0.00	0.01	0.00	73.82	0.00	0.00	74.67
<b>Offsite Total</b>	<b>0.02</b>	<b>0.53</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>73.82</b>	<b>0.00</b>	<b>0.00</b>	<b>74.67</b>
<b>Total</b>	<b>0.04</b>	<b>0.68</b>	<b>0.72</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>220.51</b>	<b>0.01</b>	<b>0.01</b>	<b>222.93</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 45**  
**Transmission and Subtransmission Construction Emissions**  
**Construction and Materials Yards**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
1-Ton Truck, 4x4	1	Paved	10	913	0.003	0.001	0.03	0.01	0.02	0.00
Boom/Crane Truck	1	Paved	12.5	913	0.003	0.001	0.04	0.01	0.02	0.00
Water Truck	2	Paved	25	913	0.003	0.001	0.17	0.04	0.08	0.02
Jet A Fuel Truck	1	Paved	10	913	0.003	0.001	0.03	0.01	0.02	0.00
Truck, Semi Tractor	1	Paved	15	913	0.003	0.001	0.05	0.01	0.02	0.01
<b>Onsite Total</b>							<b>0.32</b>	<b>0.08</b>	<b>0.15</b>	<b>0.04</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	913	0.003	0.001	0.77	0.19	0.35	0.09
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.35</b>	<b>0.09</b>
<b>Total</b>							<b>1.10</b>	<b>0.27</b>	<b>0.50</b>	<b>0.12</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 46  
Transmission and Subtransmission Construction Emissions  
Right-of-Way Clearing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	12.06	42.79	92.13	0.18	3.38	3.11	17,652.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	4829.36	1599.74	
<b>Onsite Total</b>	<b>12.06</b>	<b>42.79</b>	<b>92.13</b>	<b>0.18</b>	<b>4832.74</b>	<b>1602.85</b>	<b>17652.9</b>
Offsite Motor Vehicle Exhaust	0.25	5.48	3.30	0.01	0.19	0.05	1,298.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	308.70	31.34	
<b>Offsite Total</b>	<b>0.25</b>	<b>5.48</b>	<b>3.30</b>	<b>0.01</b>	<b>308.89</b>	<b>31.39</b>	<b>1298.6</b>
<b>Total</b>	<b>12.30</b>	<b>48.27</b>	<b>95.43</b>	<b>0.20</b>	<b>5141.63</b>	<b>1634.24</b>	<b>18951.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.42	1.50	3.22	0.01	0.12	0.11	617.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	169.03	55.99	
<b>Onsite Total</b>	<b>0.42</b>	<b>1.50</b>	<b>3.22</b>	<b>0.01</b>	<b>169.15</b>	<b>56.10</b>	<b>617.9</b>
Offsite Motor Vehicle Exhaust	0.01	0.19	0.12	0.00	0.01	0.00	45.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	10.80	1.10	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.19</b>	<b>0.12</b>	<b>0.00</b>	<b>10.81</b>	<b>1.10</b>	<b>45.5</b>
<b>Total</b>	<b>0.43</b>	<b>1.69</b>	<b>3.34</b>	<b>0.01</b>	<b>179.96</b>	<b>57.20</b>	<b>663.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	350	3	70	7
Track Type Dozer	350	3	70	7
Road Grader	350	3	70	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	350	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes
Track Type Dozer	350	0.218	0.790	1.742	0.003	0.067	0.061	258.997	0.020	0.007	Crawler Tractors
Road Grader	350	0.158	0.552	1.238	0.002	0.045	0.041	229.278	0.014	0.006	Graders

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	4.16	14.61	29.56	0.08	1.04	0.96	7235.42	0.38	0.19	7,301.5

**Table 46  
Transmission and Subtransmission Construction Emissions  
Right-of-Way Clearing**

Track Type Dozer	4.58	16.59	36.58	0.05	1.40	1.29	5438.93	0.41	0.14	5,491.5
Road Grader	3.31	11.59	25.99	0.05	0.94	0.86	4814.84	0.30	0.13	4,859.9
<b>Total</b>	<b>12.06</b>	<b>42.79</b>	<b>92.13</b>	<b>0.18</b>	<b>3.38</b>	<b>3.11</b>	<b>17489.19</b>	<b>1.09</b>	<b>0.45</b>	<b>17652.89</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.15	0.51	1.03	0.00	0.04	0.03	253.24	0.01	0.01	255.6
Track Type Dozer	0.16	0.58	1.28	0.00	0.05	0.05	190.36	0.01	0.00	192.2
Road Grader	0.12	0.41	0.91	0.00	0.03	0.03	168.52	0.01	0.00	170.1
<b>Total</b>	<b>0.42</b>	<b>1.50</b>	<b>3.22</b>	<b>0.01</b>	<b>0.12</b>	<b>0.11</b>	<b>612.12</b>	<b>0.04</b>	<b>0.02</b>	<b>617.85</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	3	70	N/A	27
Water Truck	6	70	N/A	27
Lowboy Truck/Trailer	3	70	N/A	1
Worker Commute	15	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 46**  
**Transmission and Subtransmission Construction Emissions**  
**Right-of-Way Clearing**

Onsite Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Offsite</b>										
1-Ton Truck, 4x4	0.02	0.64	0.09	0.00	0.01	0.00	93.51	0.01	0.00	94.83
Water Truck	0.07	0.46	2.68	0.01	0.09	0.05	573.52	0.00	0.02	579.65
Lowboy Truck/Trailer	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.15	4.37	0.48	0.01	0.09	0.00	606.44	0.04	0.02	613.36
<b>Offsite Total</b>	<b>0.25</b>	<b>5.48</b>	<b>3.30</b>	<b>0.01</b>	<b>0.19</b>	<b>0.05</b>	<b>1284.10</b>	<b>0.05</b>	<b>0.04</b>	<b>1298.57</b>
<b>Total</b>	<b>0.25</b>	<b>5.48</b>	<b>3.30</b>	<b>0.01</b>	<b>0.19</b>	<b>0.05</b>	<b>1284.10</b>	<b>0.05</b>	<b>0.04</b>	<b>1298.57</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	3.27	0.00	0.00	3.32
Water Truck	0.00	0.02	0.09	0.00	0.00	0.00	20.07	0.00	0.00	20.29
Lowboy Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
Worker Commute	0.01	0.15	0.02	0.00	0.00	0.00	21.23	0.00	0.00	21.47
<b>Offsite Total</b>	<b>0.01</b>	<b>0.19</b>	<b>0.12</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>44.94</b>	<b>0.00</b>	<b>0.00</b>	<b>45.45</b>
<b>Total</b>	<b>0.01</b>	<b>0.19</b>	<b>0.12</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>44.94</b>	<b>0.00</b>	<b>0.00</b>	<b>45.45</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	3	Unpaved	17	70	1.311	0.131	66.84	6.68	2.34	0.23
1-Ton Truck, 4x4	3	Paved	10	70	0.003	0.001	0.10	0.02	0.00	0.00
Water Truck	6	Unpaved	17	70	2.273	0.227	231.85	23.18	8.11	0.81
Water Truck	6	Paved	10	70	0.003	0.001	0.20	0.05	0.01	0.00
Lowboy Truck/Trailer	3	Unpaved	1	70	2.273	0.227	6.82	0.68	0.24	0.02
Worker Commute	15	Paved	58	70	0.003	0.001	2.90	0.71	0.10	0.02
<b>Offsite Total</b>							<b>308.70</b>	<b>31.34</b>	<b>10.80</b>	<b>1.10</b>
<b>Total</b>							<b>308.70</b>	<b>31.34</b>	<b>10.80</b>	<b>1.10</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 46**  
**Transmission and Subtransmission Construction Emissions**  
**Right-of-Way Clearing**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr	42	2940	114.985	38.089	4829.36	1599.74	169.03	55.99
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>4829.36</b>	<b>1599.74</b>	<b>169.03</b>	<b>55.99</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 47  
Transmission and Subtransmission Construction Emissions  
Roads and Landing Work**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	21.08	73.13	161.45	0.32	5.84	5.37	31,372.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	5666.99	1850.64	
<b>Onsite Total</b>	<b>21.08</b>	<b>73.13</b>	<b>161.45</b>	<b>0.32</b>	<b>5672.83</b>	<b>1856.01</b>	<b>31372.7</b>
Offsite Motor Vehicle Exhaust	0.40	9.31	4.65	0.02	0.29	0.07	2,021.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	501.62	50.91	
<b>Offsite Total</b>	<b>0.40</b>	<b>9.31</b>	<b>4.65</b>	<b>0.02</b>	<b>501.91</b>	<b>50.99</b>	<b>2021.4</b>
<b>Total</b>	<b>21.48</b>	<b>82.44</b>	<b>166.11</b>	<b>0.35</b>	<b>6174.74</b>	<b>1907.00</b>	<b>33394.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.97	3.38	7.50	0.01	0.27	0.25	1,436.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	283.35	92.53	
<b>Onsite Total</b>	<b>0.97</b>	<b>3.38</b>	<b>7.50</b>	<b>0.01</b>	<b>283.62</b>	<b>92.78</b>	<b>1436.6</b>
Offsite Motor Vehicle Exhaust	0.02	0.47	0.23	0.00	0.01	0.00	100.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	24.90	2.53	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.23</b>	<b>0.00</b>	<b>24.91</b>	<b>2.53</b>	<b>100.8</b>
<b>Total</b>	<b>0.99</b>	<b>3.85</b>	<b>7.73</b>	<b>0.02</b>	<b>308.53</b>	<b>95.31</b>	<b>1537.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	350	4	100	7
Track Type Dozer	350	4	100	7
Road Grader	350	4	100	5
Drum Type Compactor	250	4	100	5
Excavator	300	4	60	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	350	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes
Track Type Dozer	350	0.218	0.790	1.742	0.003	0.067	0.061	258.997	0.020	0.007	Crawler Tractors
Road Grader	350	0.158	0.552	1.238	0.002	0.045	0.041	229.278	0.014	0.006	Graders
Drum Type Compactor	250	0.104	0.346	0.995	0.002	0.033	0.031	152.952	0.009	0.004	Rollers
Excavator	300	0.149	0.485	1.022	0.002	0.037	0.034	233.525	0.013	0.006	Excavators

<sup>a</sup> From Table 111

**Table 47**  
**Transmission and Subtransmission Construction Emissions**  
**Roads and Landing Work**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	5.55	19.48	39.41	0.11	1.39	1.28	9647.23	0.50	0.25	9,735.4
Track Type Dozer	6.11	22.11	48.77	0.07	1.87	1.72	7251.90	0.55	0.19	7,322.0
Road Grader	3.15	11.04	24.76	0.05	0.89	0.82	4585.56	0.28	0.12	4,628.5
Drum Type Compactor	2.08	6.92	19.89	0.03	0.67	0.61	3059.05	0.19	0.08	3,087.6
Excavator	4.18	13.57	28.63	0.06	1.02	0.94	6538.71	0.38	0.17	6,599.3
<b>Total</b>	<b>21.08</b>	<b>73.13</b>	<b>161.45</b>	<b>0.32</b>	<b>5.84</b>	<b>5.37</b>	<b>31082.46</b>	<b>1.90</b>	<b>0.81</b>	<b>31372.69</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.28	0.97	1.97	0.01	0.07	0.06	482.36	0.03	0.01	486.8
Track Type Dozer	0.31	1.11	2.44	0.00	0.09	0.09	362.60	0.03	0.01	366.1
Road Grader	0.16	0.55	1.24	0.00	0.04	0.04	229.28	0.01	0.01	231.4
Drum Type Compactor	0.10	0.35	0.99	0.00	0.03	0.03	152.95	0.01	0.00	154.4
Excavator	0.13	0.41	0.86	0.00	0.03	0.03	196.16	0.01	0.01	198.0
<b>Total</b>	<b>0.97</b>	<b>3.38</b>	<b>7.50</b>	<b>0.01</b>	<b>0.27</b>	<b>0.25</b>	<b>1423.35</b>	<b>0.09</b>	<b>0.04</b>	<b>1436.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	8	100	N/A	27
Water Truck	8	100	N/A	27
Lowboy Truck/Trailer	4	60	N/A	1
Worker Commute	24	100	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 47**  
**Transmission and Subtransmission Construction Emissions**  
**Roads and Landing Work**

Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05
----------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88
Water Truck	0.09	0.62	3.58	0.01	0.12	0.07	764.69	0.00	0.03	772.87
Lowboy Truck/Trailer	0.00	0.01	0.07	0.00	0.00	0.00	14.16	0.00	0.00	14.31
Worker Commute	0.24	6.99	0.76	0.01	0.14	0.01	970.30	0.06	0.03	981.38
<b>Offsite Total</b>	<b>0.40</b>	<b>9.31</b>	<b>4.65</b>	<b>0.02</b>	<b>0.29</b>	<b>0.07</b>	<b>1998.53</b>	<b>0.08</b>	<b>0.07</b>	<b>2021.43</b>
<b>Total</b>	<b>0.40</b>	<b>9.31</b>	<b>4.65</b>	<b>0.02</b>	<b>0.29</b>	<b>0.07</b>	<b>1998.53</b>	<b>0.08</b>	<b>0.07</b>	<b>2021.43</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.08	0.01	0.00	0.00	0.00	12.47	0.00	0.00	12.64
Water Truck	0.00	0.03	0.18	0.00	0.01	0.00	38.23	0.00	0.00	38.64
Lowboy Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.43
Worker Commute	0.01	0.35	0.04	0.00	0.01	0.00	48.52	0.00	0.00	49.07
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.23</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>99.64</b>	<b>0.00</b>	<b>0.00</b>	<b>100.79</b>
<b>Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.23</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>99.64</b>	<b>0.00</b>	<b>0.00</b>	<b>100.79</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	8	Unpaved	17	100	1.311	0.131	178.23	17.82	8.91	0.89

**Table 47**  
**Transmission and Subtransmission Construction Emissions**  
**Roads and Landing Work**

1-Ton Truck, 4x4	8	Paved	10	100	0.003	0.001	0.27	0.07	0.01	0.00
Water Truck	8	Unpaved	17	100	2.273	0.227	309.13	30.91	15.46	1.55
Water Truck	8	Paved	10	100	0.003	0.001	0.27	0.07	0.01	0.00
Lowboy Truck/Trailer	4	Unpaved	1	60	2.273	0.227	9.09	0.91	0.27	0.03
Worker Commute	24	Paved	58	100	0.003	0.001	4.63	1.14	0.23	0.06
<b>Offsite Total</b>							<b>501.62</b>	<b>50.91</b>	<b>24.90</b>	<b>2.53</b>
<b>Total</b>							<b>501.62</b>	<b>50.91</b>	<b>24.90</b>	<b>2.53</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	2223	222288	6.65E-02	1.01E-02	147.73	22.37	7.39	1.12
Bulldozing, Scraping and Grading	hr	48	4800	114.985	38.089	5519.27	1828.27	275.96	91.41
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>5666.99</b>	<b>1850.64</b>	<b>283.35</b>	<b>92.53</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Based on excavating or backfilling and grading 18 ft. wide x 42.1 miles long x 1.5 ft. deep = 222,228 CY over 100 days

**Table 48**  
**Transmission and Subtransmission Construction Emissions**  
**Retaining Wall Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	6.07	27.28	46.47	0.11	1.75	1.61	9,979.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>6.07</b>	<b>27.28</b>	<b>46.47</b>	<b>0.11</b>	<b>1.75</b>	<b>1.61</b>	<b>9979.3</b>
Offsite Motor Vehicle Exhaust	0.44	5.94	12.17	0.03	0.46	0.22	3,087.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	589.49	59.52	
<b>Offsite Total</b>	<b>0.44</b>	<b>5.94</b>	<b>12.17</b>	<b>0.03</b>	<b>589.95</b>	<b>59.74</b>	<b>3087.2</b>
<b>Total</b>	<b>6.51</b>	<b>33.21</b>	<b>58.64</b>	<b>0.14</b>	<b>591.70</b>	<b>61.35</b>	<b>13066.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.61	2.73	4.65	0.01	0.18	0.16	997.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.61</b>	<b>2.73</b>	<b>4.65</b>	<b>0.01</b>	<b>0.18</b>	<b>0.16</b>	<b>997.9</b>
Offsite Motor Vehicle Exhaust	0.04	0.54	0.92	0.00	0.04	0.02	244.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	47.31	4.78	
<b>Offsite Total</b>	<b>0.04</b>	<b>0.54</b>	<b>0.92</b>	<b>0.00</b>	<b>47.34</b>	<b>4.80</b>	<b>244.3</b>
<b>Total</b>	<b>0.64</b>	<b>3.27</b>	<b>5.57</b>	<b>0.01</b>	<b>47.52</b>	<b>4.96</b>	<b>1242.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom Truck	350	2	200	8
Tracked Drill Rig	250	2	200	8
Rubber Tire Backhoe	125	2	200	8
Wheel Loader	250	2	200	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Tracked Drill Rig	250	0.063	0.342	0.388	0.002	0.011	0.010	187.933	0.006	0.005	Bore/Drill Rigs
Rubber Tire Backhoe	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Wheel Loader	250	0.106	0.335	0.888	0.002	0.030	0.028	148.843	0.010	0.004	Rubber Tired Loaders

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 48**  
**Transmission and Subtransmission Construction Emissions**  
**Retaining Wall Installation**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom Truck	2.12	7.08	17.14	0.03	0.62	0.57	2879.03	0.19	0.07	2,906.2
Tracked Drill Rig	1.00	5.48	6.21	0.03	0.18	0.17	3006.93	0.09	0.08	3,033.0
Rubber Tire Backhoe	1.26	9.35	8.91	0.02	0.47	0.43	1620.73	0.11	0.04	1,636.2
Wheel Loader	1.69	5.37	14.21	0.03	0.48	0.44	2381.49	0.15	0.06	2,403.9
<b>Total</b>	<b>6.07</b>	<b>27.28</b>	<b>46.47</b>	<b>0.11</b>	<b>1.75</b>	<b>1.61</b>	<b>9888.18</b>	<b>0.55</b>	<b>0.26</b>	<b>9979.34</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom Truck	0.21	0.71	1.71	0.00	0.06	0.06	287.90	0.02	0.01	290.6
Tracked Drill Rig	0.10	0.55	0.62	0.00	0.02	0.02	300.69	0.01	0.01	303.3
Rubber Tire Backhoe	0.13	0.94	0.89	0.00	0.05	0.04	162.07	0.01	0.00	163.6
Wheel Loader	0.17	0.54	1.42	0.00	0.05	0.04	238.15	0.02	0.01	240.4
<b>Total</b>	<b>0.61</b>	<b>2.73</b>	<b>4.65</b>	<b>0.01</b>	<b>0.18</b>	<b>0.16</b>	<b>988.82</b>	<b>0.05</b>	<b>0.03</b>	<b>997.93</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	200	N/A	27
Boom Truck	2	200	N/A	27
Dump Truck	4	200	N/A	60
Water Truck	2	200	N/A	27
Concrete Redi-Mix Truck	6	100	N/A	60
Worker Commute	12	200	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	HHDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 48**  
**Transmission and Subtransmission Construction Emissions**  
**Retaining Wall Installation**

Concrete Redi-Mix Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.02	0.42	0.06	0.00	0.01	0.00	62.34	0.00	0.00	63.22
Boom Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Dump Truck	0.10	0.68	3.97	0.01	0.13	0.07	849.66	0.00	0.03	858.74
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Concrete Redi-Mix Truck	0.15	1.03	5.96	0.01	0.20	0.11	1274.49	0.01	0.04	1288.11
Worker Commute	0.12	3.50	0.38	0.01	0.07	0.00	485.15	0.03	0.02	490.69
<b>Offsite Total</b>	<b>0.44</b>	<b>5.94</b>	<b>12.17</b>	<b>0.03</b>	<b>0.46</b>	<b>0.22</b>	<b>3053.99</b>	<b>0.05</b>	<b>0.10</b>	<b>3087.19</b>
<b>Total</b>	<b>0.44</b>	<b>5.94</b>	<b>12.17</b>	<b>0.03</b>	<b>0.46</b>	<b>0.22</b>	<b>3053.99</b>	<b>0.05</b>	<b>0.10</b>	<b>3087.19</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	6.23	0.00	0.00	6.32
Boom Truck	0.00	0.02	0.09	0.00	0.00	0.00	19.12	0.00	0.00	19.32
Dump Truck	0.01	0.07	0.40	0.00	0.01	0.01	84.97	0.00	0.00	85.87
Water Truck	0.00	0.02	0.09	0.00	0.00	0.00	19.12	0.00	0.00	19.32
Concrete Redi-Mix Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Worker Commute	0.01	0.35	0.04	0.00	0.01	0.00	48.52	0.00	0.00	49.07
<b>Offsite Total</b>	<b>0.04</b>	<b>0.54</b>	<b>0.92</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>241.67</b>	<b>0.00</b>	<b>0.01</b>	<b>244.31</b>
<b>Total</b>	<b>0.04</b>	<b>0.54</b>	<b>0.92</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>241.67</b>	<b>0.00</b>	<b>0.01</b>	<b>244.31</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
---------	--------	-----------	---------------------------	-----------	--	---	--	---	--	---

**Table 48**  
**Transmission and Subtransmission Construction Emissions**  
**Retaining Wall Installation**

<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	2	Unpaved	17	200	1.311	0.131	44.56	4.46	4.46	0.45
1-Ton Truck, 4x4	2	Paved	10	200	0.003	0.001	0.07	0.02	0.01	0.00
Boom Truck	2	Unpaved	17	200	2.273	0.227	77.28	7.73	7.73	0.77
Boom Truck	2	Paved	10	200	0.003	0.001	0.07	0.02	0.01	0.00
Dump Truck	4	Unpaved	17	200	2.273	0.227	154.57	15.46	15.46	1.55
Dump Truck	4	Paved	43	200	0.003	0.001	0.57	0.14	0.06	0.01
Water Truck	2	Unpaved	17	200	2.273	0.227	77.28	7.73	7.73	0.77
Water Truck	2	Paved	10	200	0.003	0.001	0.07	0.02		
Concrete Redi-Mix Truck	6	Unpaved	17	100	2.273	0.227	231.85	23.18	11.59	1.16
Concrete Redi-Mix Truck	6	Paved	43	100	0.003	0.001	0.86	0.21	0.04	0.01
Worker Commute	12	Paved	58	200	0.003	0.001	2.32	0.57	0.23	0.06
<b>Offsite Total</b>							<b>589.49</b>	<b>59.52</b>	<b>47.31</b>	<b>4.78</b>
<b>Total</b>							<b>589.49</b>	<b>59.52</b>	<b>47.31</b>	<b>4.78</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 49**  
**Transmission and Subtransmission Construction Emissions**  
**Wet Crossing Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	13.89	60.40	107.04	0.22	4.11	3.78	19,801.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>13.89</b>	<b>60.40</b>	<b>107.04</b>	<b>0.22</b>	<b>4.11</b>	<b>3.78</b>	<b>19801.1</b>
Offsite Motor Vehicle Exhaust	1.24	17.35	33.82	0.09	1.30	0.60	8,681.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1536.42	155.34	
<b>Offsite Total</b>	<b>1.24</b>	<b>17.35</b>	<b>33.82</b>	<b>0.09</b>	<b>1537.72</b>	<b>155.94</b>	<b>8681.9</b>
<b>Total</b>	<b>15.14</b>	<b>77.75</b>	<b>140.87</b>	<b>0.31</b>	<b>1541.83</b>	<b>159.72</b>	<b>28483.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.59	2.57	4.55	0.01	0.17	0.16	841.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.59</b>	<b>2.57</b>	<b>4.55</b>	<b>0.01</b>	<b>0.17</b>	<b>0.16</b>	<b>841.5</b>
Offsite Motor Vehicle Exhaust	0.04	0.67	1.07	0.00	0.04	0.02	289.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	50.98	5.16	
<b>Offsite Total</b>	<b>0.04</b>	<b>0.67</b>	<b>1.07</b>	<b>0.00</b>	<b>51.02</b>	<b>5.18</b>	<b>289.8</b>
<b>Total</b>	<b>0.63</b>	<b>3.24</b>	<b>5.62</b>	<b>0.01</b>	<b>51.20</b>	<b>5.34</b>	<b>1131.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Tracked Excavator	250	6	85	8
Rubber Tire Backhoe	125	6	85	8
Wheel Loader	250	6	85	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Tracked Excavator	250	0.105	0.339	0.785	0.002	0.026	0.024	158.540	0.009	0.004	Excavators
Rubber Tire Backhoe	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Wheel Loader	250	0.106	0.335	0.888	0.002	0.030	0.028	148.843	0.010	0.004	Rubber Tired Loaders

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Tracked Excavator	5.05	16.25	37.68	0.09	1.26	1.16	7609.93	0.46	0.20	7,680.8

**Table 49**  
**Transmission and Subtransmission Construction Emissions**  
**Wet Crossing Installation**

Rubber Tire Backhoe	3.78	28.05	26.72	0.05	1.40	1.29	4862.20	0.34	0.13	4,908.7
Wheel Loader	5.07	16.10	42.64	0.08	1.45	1.33	7144.46	0.46	0.19	7,211.6
<b>Total</b>	<b>13.89</b>	<b>60.40</b>	<b>107.04</b>	<b>0.22</b>	<b>4.11</b>	<b>3.78</b>	<b>19616.60</b>	<b>1.25</b>	<b>0.51</b>	<b>19801.09</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Tracked Excavator	0.21	0.69	1.60	0.00	0.05	0.05	323.42	0.02	0.01	326.4
Rubber Tire Backhoe	0.16	1.19	1.14	0.00	0.06	0.05	206.64	0.01	0.01	208.6
Wheel Loader	0.22	0.68	1.81	0.00	0.06	0.06	303.64	0.02	0.01	306.5
<b>Total</b>	<b>0.59</b>	<b>2.57</b>	<b>4.55</b>	<b>0.01</b>	<b>0.17</b>	<b>0.16</b>	<b>833.71</b>	<b>0.05</b>	<b>0.02</b>	<b>841.55</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	6	85	N/A	27
Dump Truck	12	85	N/A	60
Water Truck	6	85	N/A	27
Concrete Redi-Mix Truck	18	44	N/A	60
Worker Commute	36	85	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Redi-Mix Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
---------	---------------------------	--------------------------	---------------------------	---------------------------	----------------------------	-----------------------------	---------------------------	---------------------------	---------------------------	----------------------------

**Table 49**  
**Transmission and Subtransmission Construction Emissions**  
**Wet Crossing Installation**

<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.05	1.27	0.19	0.00	0.02	0.00	187.03	0.01	0.01	189.66
Dump Truck	0.30	2.05	11.92	0.03	0.39	0.22	2548.98	0.01	0.09	2576.22
Water Truck	0.07	0.46	2.68	0.01	0.09	0.05	573.52	0.00	0.02	579.65
Concrete Redi-Mix Truck	0.46	3.08	17.89	0.04	0.59	0.33	3823.47	0.02	0.13	3864.33
Worker Commute	0.37	10.49	1.14	0.02	0.22	0.01	1455.46	0.09	0.05	1472.07
<b>Offsite Total</b>	<b>1.24</b>	<b>17.35</b>	<b>33.82</b>	<b>0.09</b>	<b>1.30</b>	<b>0.60</b>	<b>8588.46</b>	<b>0.14</b>	<b>0.29</b>	<b>8681.92</b>
<b>Total</b>	<b>1.24</b>	<b>17.35</b>	<b>33.82</b>	<b>0.09</b>	<b>1.30</b>	<b>0.60</b>	<b>8588.46</b>	<b>0.14</b>	<b>0.29</b>	<b>8681.92</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.05	0.01	0.00	0.00	0.00	7.95	0.00	0.00	8.06
Dump Truck	0.01	0.09	0.51	0.00	0.02	0.01	108.33	0.00	0.00	109.49
Water Truck	0.00	0.02	0.11	0.00	0.00	0.00	24.37	0.00	0.00	24.64
Concrete Redi-Mix Truck	0.01	0.07	0.39	0.00	0.01	0.01	84.12	0.00	0.00	85.02
Worker Commute	0.02	0.45	0.05	0.00	0.01	0.00	61.86	0.00	0.00	62.56
<b>Offsite Total</b>	<b>0.04</b>	<b>0.67</b>	<b>1.07</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>286.63</b>	<b>0.01</b>	<b>0.01</b>	<b>289.76</b>
<b>Total</b>	<b>0.04</b>	<b>0.67</b>	<b>1.07</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>286.63</b>	<b>0.01</b>	<b>0.01</b>	<b>289.76</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	6	Unpaved	17	85	1.311	0.131	133.67	13.37	5.68	0.57
1-Ton Truck, 4x4	6	Paved	10	85	0.003	0.001	0.20	0.05	0.01	0.00
Dump Truck	12	Unpaved	17	85	2.273	0.227	463.70	46.37	19.71	1.97
Dump Truck	12	Paved	43	85	0.003	0.001	1.72	0.42	0.07	0.02
Water Truck	6	Unpaved	17	85	2.273	0.227	231.85	23.18	9.85	0.99
Water Truck	6	Paved	10	85	0.003	0.001	0.20	0.05		

**Table 49**  
**Transmission and Subtransmission Construction Emissions**  
**Wet Crossing Installation**

Concrete Redi-Mix Truck	18	Unpaved	17	44	2.273	0.227	695.55	69.55	15.30	1.53
Concrete Redi-Mix Truck	18	Paved	43	44	0.003	0.001	2.58	0.63	0.06	0.01
Worker Commute	36	Paved	58	85	0.003	0.001	6.95	1.71	0.30	0.07
<b>Offsite Total</b>							<b>1536.42</b>	<b>155.34</b>	<b>50.98</b>	<b>5.16</b>
<b>Total</b>							<b>1536.42</b>	<b>155.34</b>	<b>50.98</b>	<b>5.16</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 50**  
**Transmission and Subtransmission Construction Emissions**  
**Guard Structure Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	11.20	48.80	87.62	0.21	3.43	3.16	21,470.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>11.20</b>	<b>48.80</b>	<b>87.62</b>	<b>0.21</b>	<b>3.43</b>	<b>3.16</b>	<b>21470.2</b>
Offsite Motor Vehicle Exhaust	0.51	10.03	8.73	0.03	0.43	0.15	2,958.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	901.46	90.96	
<b>Offsite Total</b>	<b>0.51</b>	<b>10.03</b>	<b>8.73</b>	<b>0.03</b>	<b>901.89</b>	<b>91.11</b>	<b>2958.4</b>
<b>Total</b>	<b>11.71</b>	<b>58.83</b>	<b>96.35</b>	<b>0.24</b>	<b>905.32</b>	<b>94.27</b>	<b>24428.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.25	1.10	1.97	0.00	0.08	0.07	483.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.25</b>	<b>1.10</b>	<b>1.97</b>	<b>0.00</b>	<b>0.08</b>	<b>0.07</b>	<b>483.1</b>
Offsite Motor Vehicle Exhaust	0.01	0.23	0.20	0.00	0.01	0.00	66.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	20.28	2.05	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.23</b>	<b>0.20</b>	<b>0.00</b>	<b>20.29</b>	<b>2.05</b>	<b>66.6</b>
<b>Total</b>	<b>0.26</b>	<b>1.32</b>	<b>2.17</b>	<b>0.01</b>	<b>20.37</b>	<b>2.12</b>	<b>549.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	4	45	7
Manlift/Bucket Truck	350	4	45	5
Boom/Crane Truck	500	4	45	8
Auger Truck	500	4	45	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	500	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Auger Truck	500	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

**Table 50  
Transmission and Subtransmission Construction Emissions  
Guard Structure Installation**

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.76	8.82	11.22	0.02	0.94	0.87	1313.43	0.16	0.03	1,327.4
Manlift/Bucket Truck	1.90	8.19	22.14	0.04	0.66	0.61	4253.30	0.17	0.11	4,291.1
Boom/Crane Truck	4.24	14.17	34.27	0.06	1.24	1.14	5758.07	0.38	0.15	5,812.5
Auger Truck	3.30	17.62	19.99	0.10	0.60	0.55	9952.93	0.30	0.26	10,039.1
<b>Total</b>	<b>11.20</b>	<b>48.80</b>	<b>87.62</b>	<b>0.21</b>	<b>3.43</b>	<b>3.16</b>	<b>21277.72</b>	<b>1.01</b>	<b>0.55</b>	<b>21470.16</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.04	0.20	0.25	0.00	0.02	0.02	29.55	0.00	0.00	29.9
Manlift/Bucket Truck	0.04	0.18	0.50	0.00	0.01	0.01	95.70	0.00	0.00	96.5
Boom/Crane Truck	0.10	0.32	0.77	0.00	0.03	0.03	129.56	0.01	0.00	130.8
Auger Truck	0.07	0.40	0.45	0.00	0.01	0.01	223.94	0.01	0.01	225.9
<b>Total</b>	<b>0.25</b>	<b>1.10</b>	<b>1.97</b>	<b>0.00</b>	<b>0.08</b>	<b>0.07</b>	<b>478.75</b>	<b>0.02</b>	<b>0.01</b>	<b>483.08</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	8	45	N/A	27
1-Ton Truck, 4x4	4	45	N/A	27
Manlift/Bucket Truck	4	45	N/A	27
Boom/Crane Truck	4	45	N/A	27
Water Truck	1	45	N/A	27
Auger Truck	4	45	N/A	27
Extendable Flat Bed Pole Truck	4	45	N/A	27
Worker Commute	24	45	N/A	58

**Motor Vehicle Exhaust Emission Factors**

**Table 50**  
**Transmission and Subtransmission Construction Emissions**  
**Guard Structure Installation**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	HHDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Extendable Flat Bed Pole Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88
1-Ton Truck, 4x4	0.01	0.04	0.12	0.00	0.02	0.01	80.88	0.00	0.00	81.84
Manlift/Bucket Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Boom/Crane Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Auger Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Extendable Flat Bed Pole Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Worker Commute	0.24	6.99	0.76	0.01	0.14	0.01	970.30	0.06	0.03	981.38
<b>Offsite Total</b>	<b>0.51</b>	<b>10.03</b>	<b>8.73</b>	<b>0.03</b>	<b>0.43</b>	<b>0.15</b>	<b>2925.53</b>	<b>0.08</b>	<b>0.10</b>	<b>2958.43</b>
<b>Total</b>	<b>0.51</b>	<b>10.03</b>	<b>8.73</b>	<b>0.03</b>	<b>0.43</b>	<b>0.15</b>	<b>2925.53</b>	<b>0.08</b>	<b>0.10</b>	<b>2958.43</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 50  
Transmission and Subtransmission Construction Emissions  
Guard Structure Installation**

3/4-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	5.61	0.00	0.00	5.69
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.82	0.00	0.00	1.84
Manlift/Bucket Truck	0.00	0.01	0.04	0.00	0.00	0.00	8.60	0.00	0.00	8.69
Boom/Crane Truck	0.00	0.01	0.04	0.00	0.00	0.00	8.60	0.00	0.00	8.69
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.15	0.00	0.00	2.17
Auger Truck	0.00	0.01	0.04	0.00	0.00	0.00	8.60	0.00	0.00	8.69
Extendable Flat Bed Pole Truck	0.00	0.01	0.04	0.00	0.00	0.00	8.60	0.00	0.00	8.69
Worker Commute	0.01	0.16	0.02	0.00	0.00	0.00	21.83	0.00	0.00	22.08
<b>Offsite Total</b>	<b>0.01</b>	<b>0.23</b>	<b>0.20</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>65.82</b>	<b>0.00</b>	<b>0.00</b>	<b>66.56</b>
<b>Total</b>	<b>0.01</b>	<b>0.23</b>	<b>0.20</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>65.82</b>	<b>0.00</b>	<b>0.00</b>	<b>66.56</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	8	Unpaved	17	45	1.102	0.110	149.83	14.98	3.37	0.34
3/4-Ton Truck, 4x4	8	Paved	10	45	0.003	0.001	0.27	0.07	0.01	0.00
1-Ton Truck, 4x4	4	Unpaved	17	45	1.311	0.131	89.11	8.91	2.01	0.20
1-Ton Truck, 4x4	4	Paved	10	45	0.003	0.001	0.13	0.03	0.00	0.00
Manlift/Bucket Truck	4	Unpaved	17	45	2.273	0.227	154.57	15.46	3.48	0.35
Manlift/Bucket Truck	4	Paved	10	45	0.003	0.001	0.13	0.03	0.00	0.00
Boom/Crane Truck	4	Unpaved	17	45	2.273	0.227	154.57	15.46	3.48	0.35
Boom/Crane Truck	4	Paved	10	45	0.003	0.001	0.13	0.03	0.00	0.00
Water Truck	1	Unpaved	17	45	2.273	0.227	38.64	3.86	0.87	0.09
Water Truck	1	Paved	10	45	0.003	0.001	0.03	0.01	0.00	0.00
Auger Truck	4	Unpaved	17	45	2.273	0.227	154.57	15.46	3.48	0.35
Auger Truck	4	Paved	10	45	0.003	0.001	0.13	0.03	0.00	0.00
Extendable Flat Bed Pole Truck	4	Unpaved	17	45	2.273	0.227	154.57	15.46	3.48	0.35
Extendable Flat Bed Pole Truck	4	Paved	10	45	0.003	0.001	0.13	0.03	0.00	0.00
Worker Commute	24	Paved	58	45	0.003	0.001	4.63	1.14	0.10	0.03
<b>Offsite Total</b>							<b>901.46</b>	<b>90.96</b>	<b>20.28</b>	<b>2.05</b>
<b>Total</b>							<b>901.46</b>	<b>90.96</b>	<b>20.28</b>	<b>2.05</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]



**Table 50**  
**Transmission and Subtransmission Construction Emissions**  
**Guard Structure Installation**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 51  
Transmission and Subtransmission Construction Emissions  
Remove Existing Conductor & GW**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	16.11	65.40	162.50	0.33	5.11	4.70	33,567.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>16.11</b>	<b>65.40</b>	<b>162.50</b>	<b>0.33</b>	<b>5.11</b>	<b>4.70</b>	<b>33567.5</b>
Offsite Motor Vehicle Exhaust	0.78	14.59	14.67	0.05	0.72	0.26	4,764.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1397.43	141.12	
<b>Offsite Total</b>	<b>0.78</b>	<b>14.59</b>	<b>14.67</b>	<b>0.05</b>	<b>1398.15</b>	<b>141.38</b>	<b>4764.6</b>
<b>Total</b>	<b>16.89</b>	<b>79.98</b>	<b>177.16</b>	<b>0.38</b>	<b>1403.27</b>	<b>146.09</b>	<b>38332.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.78	3.18	7.99	0.02	0.25	0.23	1,627.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.78</b>	<b>3.18</b>	<b>7.99</b>	<b>0.02</b>	<b>0.25</b>	<b>0.23</b>	<b>1627.7</b>
Offsite Motor Vehicle Exhaust	0.04	0.76	0.72	0.00	0.04	0.01	238.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	68.72	6.94	
<b>Offsite Total</b>	<b>0.04</b>	<b>0.76</b>	<b>0.72</b>	<b>0.00</b>	<b>68.76</b>	<b>6.96</b>	<b>238.5</b>
<b>Total</b>	<b>0.82</b>	<b>3.93</b>	<b>8.70</b>	<b>0.02</b>	<b>69.01</b>	<b>7.19</b>	<b>1866.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Manlift/Bucket Truck	350	9	105	10
Sleeving Truck	300	3	105	5
Boom/Crane Truck	350	3	105	5
Bull Wheel Puller	500	3	70	5
Hydraulic Rewind Puller	300	3	70	5

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Sleeving Truck	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Bull Wheel Puller	500	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Hydraulic Rewind Puller	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 51**  
**Transmission and Subtransmission Construction Emissions**  
**Remove Existing Conductor & GW**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Manlift/Bucket Truck	8.54	36.87	99.62	0.19	2.96	2.72	19139.85	0.77	0.50	19,309.9
Sleeving Truck	1.86	7.30	15.60	0.04	0.52	0.48	3810.15	0.17	0.10	3,844.3
Boom/Crane Truck	1.99	6.64	16.07	0.03	0.58	0.53	2699.09	0.18	0.07	2,724.6
Bull Wheel Puller	1.86	7.30	15.60	0.04	0.52	0.48	3810.15	0.17	0.10	3,844.3
Hydraulic Rewind Puller	1.86	7.30	15.60	0.04	0.52	0.48	3810.15	0.17	0.10	3,844.3
<b>Total</b>	<b>16.11</b>	<b>65.40</b>	<b>162.50</b>	<b>0.33</b>	<b>5.11</b>	<b>4.70</b>	<b>33269.39</b>	<b>1.45</b>	<b>0.86</b>	<b>33567.45</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Manlift/Bucket Truck	0.45	1.94	5.23	0.01	0.16	0.14	1004.84	0.04	0.03	1,013.8
Sleeving Truck	0.10	0.38	0.82	0.00	0.03	0.03	200.03	0.01	0.01	201.8
Boom/Crane Truck	0.10	0.35	0.84	0.00	0.03	0.03	141.70	0.01	0.00	143.0
Bull Wheel Puller	0.07	0.26	0.55	0.00	0.02	0.02	133.36	0.01	0.00	134.6
Hydraulic Rewind Puller	0.07	0.26	0.55	0.00	0.02	0.02	133.36	0.01	0.00	134.6
<b>Total</b>	<b>0.78</b>	<b>3.18</b>	<b>7.99</b>	<b>0.02</b>	<b>0.25</b>	<b>0.23</b>	<b>1613.29</b>	<b>0.07</b>	<b>0.04</b>	<b>1627.74</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	12	105	N/A	27
Manlift/Bucket Truck	9	105	N/A	27
Sleeving Truck	3	105	N/A	27
Boom/Crane Truck	3	105	N/A	27
Truck, Semi Tractor	3	95	N/A	27
Water Truck	2	45	N/A	27
Lowboy Truck/Trailer	9	95	N/A	27
Worker Commute	42	105	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 51**  
**Transmission and Subtransmission Construction Emissions**  
**Remove Existing Conductor & GW**

Sleeving Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Truck, Semi Tractor	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.02	0.12	0.36	0.00	0.05	0.02	242.63	0.00	0.01	245.51
Manlift/Bucket Truck	0.10	0.69	4.02	0.01	0.13	0.07	860.28	0.00	0.03	869.47
Sleeving Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Boom/Crane Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Truck, Semi Tractor	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Lowboy Truck/Trailer	0.10	0.69	4.02	0.01	0.13	0.07	860.28	0.00	0.03	869.47
Worker Commute	0.43	12.24	1.33	0.02	0.25	0.01	1698.03	0.10	0.06	1717.41
<b>Offsite Total</b>	<b>0.78</b>	<b>14.59</b>	<b>14.67</b>	<b>0.05</b>	<b>0.72</b>	<b>0.26</b>	<b>4712.68</b>	<b>0.12</b>	<b>0.16</b>	<b>4764.56</b>
<b>Total</b>	<b>0.78</b>	<b>14.59</b>	<b>14.67</b>	<b>0.05</b>	<b>0.72</b>	<b>0.26</b>	<b>4712.68</b>	<b>0.12</b>	<b>0.16</b>	<b>4764.56</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	12.74	0.00	0.00	12.89
Manlift/Bucket Truck	0.01	0.04	0.21	0.00	0.01	0.00	45.16	0.00	0.00	45.65
Sleeving Truck	0.00	0.01	0.07	0.00	0.00	0.00	15.05	0.00	0.00	15.22
Boom/Crane Truck	0.00	0.01	0.07	0.00	0.00	0.00	15.05	0.00	0.00	15.22
Truck, Semi Tractor	0.00	0.01	0.06	0.00	0.00	0.00	13.62	0.00	0.00	13.77
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.30	0.00	0.00	4.35
Lowboy Truck/Trailer	0.00	0.03	0.19	0.00	0.01	0.00	40.86	0.00	0.00	41.30
Worker Commute	0.02	0.64	0.07	0.00	0.01	0.00	89.15	0.01	0.00	90.16
<b>Offsite Total</b>	<b>0.04</b>	<b>0.76</b>	<b>0.72</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>235.95</b>	<b>0.01</b>	<b>0.01</b>	<b>238.55</b>
<b>Total</b>	<b>0.04</b>	<b>0.76</b>	<b>0.72</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>235.95</b>	<b>0.01</b>	<b>0.01</b>	<b>238.55</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 51**  
**Transmission and Subtransmission Construction Emissions**  
**Remove Existing Conductor & GW**

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	12	Unpaved	17	105	1.311	0.131	267.34	26.73	14.04	1.40
1-Ton Truck, 4x4	12	Paved	10	105	0.003	0.001	0.40	0.10	0.02	0.01
Manlift/Bucket Truck	9	Unpaved	17	105	2.273	0.227	347.77	34.78	18.26	1.83
Manlift/Bucket Truck	9	Paved	10	105	0.003	0.001	0.30	0.07	0.02	0.00
Sleeving Truck	3	Unpaved	17	105	2.273	0.227	115.92	11.59	6.09	0.61
Sleeving Truck	3	Paved	10	105	0.003	0.001	0.10	0.02	0.01	0.00
Boom/Crane Truck	3	Unpaved	17	105	2.273	0.227	115.92	11.59	6.09	0.61
Boom/Crane Truck	3	Paved	10	105	0.003	0.001	0.10	0.02	0.01	0.00
Truck, Semi Tractor	3	Unpaved	17	95	2.273	0.227	115.92	11.59	5.51	0.55
Truck, Semi Tractor	3	Paved	10	95	0.003	0.001	0.10	0.02	0.00	0.00
Water Truck	2	Unpaved	17	45	2.273	0.227	77.28	7.73	1.74	0.17
Water Truck	2	Paved	10	45	0.003	0.001	0.07	0.02	0.00	0.00
Lowboy Truck/Trailer	9	Unpaved	17	95	2.273	0.227	347.77	34.78	16.52	1.65
Lowboy Truck/Trailer	9	Paved	10	95	0.003	0.001	0.30	0.07	0.01	0.00
Worker Commute	42	Paved	58	105	0.003	0.001	8.11	1.99	0.43	0.10
<b>Offsite Total</b>							<b>1397.43</b>	<b>141.12</b>	<b>68.72</b>	<b>6.94</b>
<b>Total</b>							<b>1397.43</b>	<b>141.12</b>	<b>68.72</b>	<b>6.94</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 52**  
**Transmission and Subtransmission Construction Emissions**  
**Shoo-fly Pole Haul**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.12	7.08	17.14	0.03	0.62	0.57	2,906.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.12</b>	<b>7.08</b>	<b>17.14</b>	<b>0.03</b>	<b>0.62</b>	<b>0.57</b>	<b>2906.2</b>
Offsite Motor Vehicle Exhaust	0.15	3.14	2.55	0.01	0.13	0.04	873.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	232.44	23.50	
<b>Offsite Total</b>	<b>0.15</b>	<b>3.14</b>	<b>2.55</b>	<b>0.01</b>	<b>232.57</b>	<b>23.55</b>	<b>873.4</b>
<b>Total</b>	<b>2.27</b>	<b>10.22</b>	<b>19.69</b>	<b>0.04</b>	<b>233.19</b>	<b>24.12</b>	<b>3779.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	7.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.58	0.06	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.58</b>	<b>0.06</b>	<b>2.2</b>
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.05</b>	<b>0.00</b>	<b>0.58</b>	<b>0.06</b>	<b>9.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	2	5	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	0.317	1.108	2.727	0.005	0.095	0.091	425.880	0.029	0.013	13.6

**Table 52**  
**Transmission and Subtransmission Construction Emissions**  
**Shoo-fly Pole Haul**

Boom/Crane Truck	2.12	7.08	17.14	0.03	0.62	0.57	2879.03	0.19	0.07	2,906.2
<b>Total</b>	<b>2.12</b>	<b>7.08</b>	<b>17.14</b>	<b>0.03</b>	<b>0.62</b>	<b>0.57</b>	<b>2879.03</b>	<b>0.19</b>	<b>0.07</b>	<b>2906.24</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.01	0.02	0.04	0.00	0.00	0.00	7.20	0.00	0.00	7.3
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.20</b>	<b>0.00</b>	<b>0.00</b>	<b>7.27</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	2	5	N/A	27
Boom/Crane Truck	2	5	N/A	27
Water Truck	1	5	N/A	27
Flat Bed Pole Truck	2	5	N/A	27
Worker Commute	8	5	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Pole Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

**Table 52**  
**Transmission and Subtransmission Construction Emissions**  
**Shoo-fly Pole Haul**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.42	0.06	0.00	0.01	0.00	62.34	0.00	0.00	63.22
Boom/Crane Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Pole Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.15</b>	<b>3.14</b>	<b>2.55</b>	<b>0.01</b>	<b>0.13</b>	<b>0.04</b>	<b>863.71</b>	<b>0.03</b>	<b>0.03</b>	<b>873.39</b>
<b>Total</b>	<b>0.15</b>	<b>3.14</b>	<b>2.55</b>	<b>0.01</b>	<b>0.13</b>	<b>0.04</b>	<b>863.71</b>	<b>0.03</b>	<b>0.03</b>	<b>873.39</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.24
Flat Bed Pole Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.82
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.16</b>	<b>0.00</b>	<b>0.00</b>	<b>2.18</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.16</b>	<b>0.00</b>	<b>0.00</b>	<b>2.18</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>



**Table 52**  
**Transmission and Subtransmission Construction Emissions**  
**Shoo-fly Pole Haul**

<b>Offsite</b>										
3/4-Ton Truck, 4x4	2	Unpaved	17	5	1.102	0.110	37.46	3.75	0.09	0.01
3/4-Ton Truck, 4x4	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Boom/Crane Truck	2	Unpaved	17	5	2.273	0.227	77.28	7.73	0.19	0.02
Boom/Crane Truck	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	1	Unpaved	17	5	2.273	0.227	38.64	3.86	0.10	0.01
Water Truck	1	Paved	10	5	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Pole Truck	2	Unpaved	17	5	2.273	0.227	77.28	7.73	0.19	0.02
Flat Bed Pole Truck	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	8	Paved	58	5	0.003	0.001	1.54	0.38	0.00	0.00
<b>Offsite Total</b>							<b>232.44</b>	<b>23.50</b>	<b>0.58</b>	<b>0.06</b>
<b>Total</b>							<b>232.44</b>	<b>23.50</b>	<b>0.58</b>	<b>0.06</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 53**  
**Transmission and Subtransmission Construction Emissions**  
**Install Shoo-fly Pole**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	6.33	31.56	54.48	0.12	1.97	1.81	11,912.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.20	0.18	
<b>Onsite Total</b>	<b>6.33</b>	<b>31.56</b>	<b>54.48</b>	<b>0.12</b>	<b>3.16</b>	<b>1.99</b>	<b>11912.3</b>
Offsite Motor Vehicle Exhaust	0.28	5.88	4.21	0.02	0.23	0.07	1,549.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	357.50	36.30	
<b>Offsite Total</b>	<b>0.28</b>	<b>5.88</b>	<b>4.21</b>	<b>0.02</b>	<b>357.73</b>	<b>36.38</b>	<b>1549.8</b>
<b>Total</b>	<b>6.61</b>	<b>37.44</b>	<b>58.69</b>	<b>0.14</b>	<b>360.89</b>	<b>38.36</b>	<b>13462.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.03	0.15	0.26	0.00	0.01	0.01	55.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.03</b>	<b>0.15</b>	<b>0.26</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>55.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.03	0.02	0.00	0.00	0.00	7.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.67	0.17	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>0.00</b>	<b>1.67</b>	<b>0.17</b>	<b>7.5</b>
<b>Total</b>	<b>0.03</b>	<b>0.18</b>	<b>0.28</b>	<b>0.00</b>	<b>1.69</b>	<b>0.18</b>	<b>62.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Manlift/Bucket Truck	350	2	10	10
Boom/Crane Truck	350	2	10	7
Auger Truck	210	2	7	8
Backhoe/Front Loader	125	2	10	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Auger Truck	210	0.063	0.342	0.388	0.002	0.011	0.010	187.933	0.006	0.005	Bore/Drill Rigs
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 53**  
**Transmission and Subtransmission Construction Emissions**  
**Install Shoo-fly Pole**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Manlift/Bucket Truck	1.90	8.19	22.14	0.04	0.66	0.61	4253.30	0.17	0.11	4,291.1
Boom/Crane Truck	1.85	6.20	14.99	0.02	0.54	0.50	2519.15	0.17	0.07	2,543.0
Auger Truck	1.00	5.48	6.21	0.03	0.18	0.17	3006.93	0.09	0.08	3,033.0
Backhoe/Front Loader	1.57	11.69	11.13	0.02	0.58	0.54	2025.92	0.14	0.05	2,045.3
<b>Total</b>	<b>6.33</b>	<b>31.56</b>	<b>54.48</b>	<b>0.12</b>	<b>1.97</b>	<b>1.81</b>	<b>11805.30</b>	<b>0.57</b>	<b>0.31</b>	<b>11912.34</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Manlift/Bucket Truck	0.01	0.04	0.11	0.00	0.00	0.00	21.27	0.00	0.00	21.5
Boom/Crane Truck	0.01	0.03	0.07	0.00	0.00	0.00	12.60	0.00	0.00	12.7
Auger Truck	0.00	0.02	0.02	0.00	0.00	0.00	10.52	0.00	0.00	10.6
Backhoe/Front Loader	0.01	0.06	0.06	0.00	0.00	0.00	10.13	0.00	0.00	10.2
<b>Total</b>	<b>0.03</b>	<b>0.15</b>	<b>0.26</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>54.52</b>	<b>0.00</b>	<b>0.00</b>	<b>55.01</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	10	N/A	27
Manlift/Bucket Truck	2	10	N/A	27
Boom/Crane Truck	2	10	N/A	27
Auger Truck	2	7	N/A	27
Water Truck	2	10	N/A	27
Extendable Flat Bed Pole Truck	2	10	N/A	27
Worker Commute	18	10	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 53**  
**Transmission and Subtransmission Construction Emissions**  
**Install Shoo-fly Pole**

Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Extendable Flat Bed Pole Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92
Manlift/Bucket Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Boom/Crane Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Auger Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.28</b>	<b>5.88</b>	<b>4.21</b>	<b>0.02</b>	<b>0.23</b>	<b>0.07</b>	<b>1532.86</b>	<b>0.05</b>	<b>0.05</b>	<b>1549.82</b>
<b>Total</b>	<b>0.28</b>	<b>5.88</b>	<b>4.21</b>	<b>0.02</b>	<b>0.23</b>	<b>0.07</b>	<b>1532.86</b>	<b>0.05</b>	<b>0.05</b>	<b>1549.82</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.20
Manlift/Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.97
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.97
Auger Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.68
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.97
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	3.64	0.00	0.00	3.68
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.38</b>	<b>0.00</b>	<b>0.00</b>	<b>7.46</b>
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.38</b>	<b>0.00</b>	<b>0.00</b>	<b>7.46</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
---------	--------	-----------	---------------------------	-----------	--	---	--	---	--	---

**Table 53**  
**Transmission and Subtransmission Construction Emissions**  
**Install Shoo-fly Pole**

<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	2	Unpaved	17	10	1.311	0.131	44.56	4.46	0.22	0.02
1-Ton Truck, 4x4	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Manlift/Bucket Truck	2	Unpaved	17	10	2.273	0.227	77.28	7.73	0.39	0.04
Manlift/Bucket Truck	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Boom/Crane Truck	2	Unpaved	17	10	2.273	0.227	77.28	7.73	0.39	0.04
Boom/Crane Truck	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Auger Truck	2	Unpaved	17	7	2.273	0.227	77.28	7.73	0.27	0.03
Auger Truck	2	Paved	10	7	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	2	Unpaved	17	10	2.273	0.227	77.28	7.73	0.39	0.04
Water Truck	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	18	Paved	58	10	0.003	0.001	3.48	0.85	0.02	0.00
<b>Offsite Total</b>							<b>357.50</b>	<b>36.30</b>	<b>1.67</b>	<b>0.17</b>
<b>Total</b>							<b>357.50</b>	<b>36.30</b>	<b>1.67</b>	<b>0.17</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	18	173	6.65E-02	1.01E-02	1.20	0.18	0.01	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.20</b>	<b>0.18</b>	<b>0.01</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Based on 29 poles, 3.2 ft. diameter x 20 ft. deep over 10 days

**Table 54**  
**Transmission and Subtransmission Construction Emissions**  
**Shoo-fly Pole Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.44	5.43	10.97	0.02	0.51	0.47	1,737.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.44</b>	<b>5.43</b>	<b>10.97</b>	<b>0.02</b>	<b>0.51</b>	<b>0.47</b>	<b>1737.6</b>
Offsite Motor Vehicle Exhaust	0.25	6.00	2.48	0.01	0.18	0.04	1,226.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	240.32	24.58	
<b>Offsite Total</b>	<b>0.25</b>	<b>6.00</b>	<b>2.48</b>	<b>0.01</b>	<b>240.50</b>	<b>24.62</b>	<b>1226.6</b>
<b>Total</b>	<b>1.68</b>	<b>11.43</b>	<b>13.46</b>	<b>0.03</b>	<b>241.02</b>	<b>25.09</b>	<b>2964.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	7.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	5.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.12	0.11	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>1.12</b>	<b>0.11</b>	<b>5.3</b>
<b>Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.06</b>	<b>0.00</b>	<b>1.12</b>	<b>0.12</b>	<b>12.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	1	8	6
Boom/Crane Truck	350	1	8	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 54**  
**Transmission and Subtransmission Construction Emissions**  
**Shoo-fly Pole Assembly**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	0.38	1.89	2.40	0.00	0.20	0.19	281.45	0.03	0.01	284.5
Boom/Crane Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
<b>Total</b>	<b>1.44</b>	<b>5.43</b>	<b>10.97</b>	<b>0.02</b>	<b>0.51</b>	<b>0.47</b>	<b>1720.96</b>	<b>0.13</b>	<b>0.04</b>	<b>1737.57</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.00	0.01	0.01	0.00	0.00	0.00	1.13	0.00	0.00	1.1
Boom/Crane Truck	0.00	0.01	0.03	0.00	0.00	0.00	5.76	0.00	0.00	5.8
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.88</b>	<b>0.00</b>	<b>0.00</b>	<b>6.95</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	2	8	N/A	27
1-Ton Truck, 4x4	2	8	N/A	27
Boom/Crane Truck	2	10	N/A	27
Water Truck	2	10	N/A	27
Worker Commute	18	8	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Table 54**  
**Transmission and Subtransmission Construction Emissions**  
**Shoo-fly Pole Assembly**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.42	0.06	0.00	0.01	0.00	62.34	0.00	0.00	63.22
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92
Boom/Crane Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.25</b>	<b>6.00</b>	<b>2.48</b>	<b>0.01</b>	<b>0.18</b>	<b>0.04</b>	<b>1212.86</b>	<b>0.05</b>	<b>0.04</b>	<b>1226.60</b>
<b>Total</b>	<b>0.25</b>	<b>6.00</b>	<b>2.48</b>	<b>0.01</b>	<b>0.18</b>	<b>0.04</b>	<b>1212.86</b>	<b>0.05</b>	<b>0.04</b>	<b>1226.60</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.97
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.97
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.91	0.00	0.00	2.94
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.23</b>	<b>0.00</b>	<b>0.00</b>	<b>5.29</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.23</b>	<b>0.00</b>	<b>0.00</b>	<b>5.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00



**Table 54**  
**Transmission and Subtransmission Construction Emissions**  
**Shoo-fly Pole Assembly**

<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	2	Unpaved	17	8	1.102	0.110	37.46	3.75	0.15	0.01
3/4-Ton Truck, 4x4	2	Paved	10	8	0.003	0.001	0.07	0.02	0.00	0.00
1-Ton Truck, 4x4	2	Unpaved	17	8	1.311	0.131	44.56	4.46	0.18	0.02
1-Ton Truck, 4x4	2	Paved	10	8	0.003	0.001	0.07	0.02	0.00	0.00
Boom/Crane Truck	2	Unpaved	17	10	2.273	0.227	77.28	7.73	0.39	0.04
Boom/Crane Truck	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	2	Unpaved	17	10	2.273	0.227	77.28	7.73	0.39	0.04
Water Truck	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	18	Paved	58	8	0.003	0.001	3.48	0.85	0.01	0.00
<b>Offsite Total</b>							<b>240.32</b>	<b>24.58</b>	<b>1.12</b>	<b>0.11</b>
<b>Total</b>							<b>240.32</b>	<b>24.58</b>	<b>1.12</b>	<b>0.11</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 55  
Transmission and Subtransmission Construction Emissions  
LST Removal**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	11.70	44.83	88.17	0.14	4.29	3.95	13,770.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>11.70</b>	<b>44.83</b>	<b>88.17</b>	<b>0.14</b>	<b>4.29</b>	<b>3.95</b>	<b>13770.5</b>
Offsite Motor Vehicle Exhaust	0.32	7.51	3.63	0.02	0.26	0.06	1,683.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	370.56	37.79	
<b>Offsite Total</b>	<b>0.32</b>	<b>7.51</b>	<b>3.63</b>	<b>0.02</b>	<b>370.81</b>	<b>37.85</b>	<b>1683.8</b>
<b>Total</b>	<b>12.03</b>	<b>52.35</b>	<b>91.80</b>	<b>0.16</b>	<b>375.10</b>	<b>41.80</b>	<b>15454.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.73	2.80	5.51	0.01	0.27	0.25	860.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.73</b>	<b>2.80</b>	<b>5.51</b>	<b>0.01</b>	<b>0.27</b>	<b>0.25</b>	<b>860.7</b>
Offsite Motor Vehicle Exhaust	0.02	0.47	0.23	0.00	0.02	0.00	105.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	23.16	2.36	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.23</b>	<b>0.00</b>	<b>23.18</b>	<b>2.37</b>	<b>105.2</b>
<b>Total</b>	<b>0.75</b>	<b>3.27</b>	<b>5.74</b>	<b>0.01</b>	<b>23.44</b>	<b>2.61</b>	<b>965.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	6	125	10
Excavator	250	1	125	10
R/T Crane (M)	215	3	125	5
R/T Crane (L)	300	6	125	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Excavator	250	0.105	0.339	0.785	0.002	0.026	0.024	158.540	0.009	0.004	Excavators
R/T Crane (M)	215	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
R/T Crane (L)	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

**Table 55  
Transmission and Subtransmission Construction Emissions  
LST Removal**

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	3.78	18.90	24.05	0.03	2.02	1.85	2814.48	0.34	0.07	2,844.5
Excavator	1.05	3.39	7.85	0.02	0.26	0.24	1585.40	0.09	0.04	1,600.2
R/T Crane (M)	1.31	3.95	11.29	0.02	0.39	0.36	1680.87	0.12	0.04	1,696.9
R/T Crane (L)	5.56	18.60	44.98	0.07	1.62	1.49	7557.46	0.50	0.20	7,628.9
<b>Total</b>	<b>11.70</b>	<b>44.83</b>	<b>88.17</b>	<b>0.14</b>	<b>4.29</b>	<b>3.95</b>	<b>13638.22</b>	<b>1.06</b>	<b>0.36</b>	<b>13770.46</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.24	1.18	1.50	0.00	0.13	0.12	175.91	0.02	0.00	177.8
Excavator	0.07	0.21	0.49	0.00	0.02	0.02	99.09	0.01	0.00	100.0
R/T Crane (M)	0.08	0.25	0.71	0.00	0.02	0.02	105.05	0.01	0.00	106.1
R/T Crane (L)	0.35	1.16	2.81	0.00	0.10	0.09	472.34	0.03	0.01	476.8
<b>Total</b>	<b>0.73</b>	<b>2.80</b>	<b>5.51</b>	<b>0.01</b>	<b>0.27</b>	<b>0.25</b>	<b>852.39</b>	<b>0.07</b>	<b>0.02</b>	<b>860.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	6	125	N/A	27
Water Truck	2	125	N/A	27
Dump Truck	1	125	N/A	27
Flat Bed Truck/Trailer	3	125	N/A	27
Worker Commute	24	125	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**Table 55  
Transmission and Subtransmission Construction Emissions  
LST Removal**

Offsite										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Dump Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Truck/Trailer	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Worker Commute	0.24	6.99	0.76	0.01	0.14	0.01	970.30	0.06	0.03	981.38
<b>Offsite Total</b>	<b>0.32</b>	<b>7.51</b>	<b>3.63</b>	<b>0.02</b>	<b>0.26</b>	<b>0.06</b>	<b>1665.14</b>	<b>0.06</b>	<b>0.06</b>	<b>1683.78</b>
<b>Total</b>	<b>0.32</b>	<b>7.51</b>	<b>3.63</b>	<b>0.02</b>	<b>0.26</b>	<b>0.06</b>	<b>1665.14</b>	<b>0.06</b>	<b>0.06</b>	<b>1683.78</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	7.58	0.00	0.00	7.67
Water Truck	0.00	0.01	0.06	0.00	0.00	0.00	11.95	0.00	0.00	12.08
Dump Truck	0.00	0.00	0.03	0.00	0.00	0.00	5.97	0.00	0.00	6.04
Flat Bed Truck/Trailer	0.00	0.01	0.08	0.00	0.00	0.00	17.92	0.00	0.00	18.11
Worker Commute	0.02	0.44	0.05	0.00	0.01	0.00	60.64	0.00	0.00	61.34
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.23</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>104.07</b>	<b>0.00</b>	<b>0.00</b>	<b>105.24</b>
<b>Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.23</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>104.07</b>	<b>0.00</b>	<b>0.00</b>	<b>105.24</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 55  
Transmission and Subtransmission Construction Emissions  
LST Removal**

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	6	Unpaved	17	125	1.311	0.131	133.67	13.37	8.35	0.84
1-Ton Truck, 4x4	6	Paved	10	125	0.003	0.001	0.20	0.05	0.01	0.00
Water Truck	2	Unpaved	17	125	2.273	0.227	77.28	7.73	4.83	0.48
Water Truck	2	Paved	10	125	0.003	0.001	0.07	0.02	0.00	0.00
Dump Truck	1	Unpaved	17	125	2.273	0.227	38.64	3.86	2.42	0.24
Dump Truck	1	Paved	10	125	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Truck/Trailer	3	Unpaved	17	125	2.273	0.227	115.92	11.59	7.25	0.72
Flat Bed Truck/Trailer	3	Paved	10	125	0.003	0.001	0.10	0.02	0.01	0.00
Worker Commute	24	Paved	58	125	0.003	0.001	4.63	1.14	0.29	0.07
<b>Offsite Total</b>							<b>370.56</b>	<b>37.79</b>	<b>23.16</b>	<b>2.36</b>
<b>Total</b>							<b>370.56</b>	<b>37.79</b>	<b>23.16</b>	<b>2.36</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 56**  
**Transmission and Subtransmission Construction Emissions**  
**LST Foundation Removal**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.67	13.49	25.93	0.06	1.09	1.01	5,551.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.67</b>	<b>13.49</b>	<b>25.93</b>	<b>0.06</b>	<b>1.09</b>	<b>1.01</b>	<b>5551.2</b>
Offsite Motor Vehicle Exhaust	0.19	5.03	1.43	0.01	0.13	0.02	879.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	99.20	10.38	
<b>Offsite Total</b>	<b>0.19</b>	<b>5.03</b>	<b>1.43</b>	<b>0.01</b>	<b>99.33</b>	<b>10.40</b>	<b>879.1</b>
<b>Total</b>	<b>3.86</b>	<b>18.52</b>	<b>27.37</b>	<b>0.07</b>	<b>100.42</b>	<b>11.41</b>	<b>6430.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.17	0.64	1.23	0.00	0.05	0.05	263.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.17</b>	<b>0.64</b>	<b>1.23</b>	<b>0.00</b>	<b>0.05</b>	<b>0.05</b>	<b>263.7</b>
Offsite Motor Vehicle Exhaust	0.01	0.24	0.07	0.00	0.01	0.00	41.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	4.71	0.49	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.24</b>	<b>0.07</b>	<b>0.00</b>	<b>4.72</b>	<b>0.49</b>	<b>41.8</b>
<b>Total</b>	<b>0.18</b>	<b>0.88</b>	<b>1.30</b>	<b>0.00</b>	<b>4.77</b>	<b>0.54</b>	<b>305.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	1	95	10
Backhoe/Front Loader	350	1	95	10
Excavator	250	1	95	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Backhoe/Front Loader	350	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes
Excavator	250	0.105	0.339	0.785	0.002	0.026	0.024	158.540	0.009	0.004	Excavators

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	0.63	3.15	4.01	0.01	0.34	0.31	469.08	0.06	0.01	474.1

**Table 56**  
**Transmission and Subtransmission Construction Emissions**  
**LST Foundation Removal**

Backhoe/Front Loader	1.98	6.96	14.07	0.04	0.50	0.46	3445.44	0.18	0.09	3,476.9
Excavator	1.05	3.39	7.85	0.02	0.26	0.24	1585.40	0.09	0.04	1,600.2
<b>Total</b>	<b>3.67</b>	<b>13.49</b>	<b>25.93</b>	<b>0.06</b>	<b>1.09</b>	<b>1.01</b>	<b>5499.92</b>	<b>0.33</b>	<b>0.14</b>	<b>5551.16</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.03	0.15	0.19	0.00	0.02	0.01	22.28	0.00	0.00	22.5
Backhoe/Front Loader	0.09	0.33	0.67	0.00	0.02	0.02	163.66	0.01	0.00	165.2
Excavator	0.05	0.16	0.37	0.00	0.01	0.01	75.31	0.00	0.00	76.0
<b>Total</b>	<b>0.17</b>	<b>0.64</b>	<b>1.23</b>	<b>0.00</b>	<b>0.05</b>	<b>0.05</b>	<b>261.25</b>	<b>0.02</b>	<b>0.01</b>	<b>263.68</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	1	95	N/A	27
Water Truck	1	95	N/A	27
Dump Truck	1	95	N/A	27
Worker Commute	16	95	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 56**  
**Transmission and Subtransmission Construction Emissions**  
**LST Foundation Removal**

Offsite										
3/4-Ton Truck, 4x4	0.01	0.21	0.03	0.00	0.00	0.00	31.17	0.00	0.00	31.61
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Dump Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Worker Commute	0.16	4.66	0.51	0.01	0.10	0.00	646.87	0.04	0.02	654.25
<b>Offsite Total</b>	<b>0.19</b>	<b>5.03</b>	<b>1.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.02</b>	<b>869.21</b>	<b>0.04</b>	<b>0.03</b>	<b>879.08</b>
<b>Total</b>	<b>0.19</b>	<b>5.03</b>	<b>1.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.02</b>	<b>869.21</b>	<b>0.04</b>	<b>0.03</b>	<b>879.08</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.01	0.00	0.00	0.00	0.00	1.48	0.00	0.00	1.50
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.54	0.00	0.00	4.59
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.54	0.00	0.00	4.59
Worker Commute	0.01	0.22	0.02	0.00	0.00	0.00	30.73	0.00	0.00	31.08
<b>Offsite Total</b>	<b>0.01</b>	<b>0.24</b>	<b>0.07</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>41.29</b>	<b>0.00</b>	<b>0.00</b>	<b>41.76</b>
<b>Total</b>	<b>0.01</b>	<b>0.24</b>	<b>0.07</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>41.29</b>	<b>0.00</b>	<b>0.00</b>	<b>41.76</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	1	Unpaved	17	95	1.102	0.110	18.73	1.87	0.89	0.09
3/4-Ton Truck, 4x4	1	Paved	10	95	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	17	95	2.273	0.227	38.64	3.86	1.84	0.18
Water Truck	1	Paved	10	95	0.003	0.001	0.03	0.01	0.00	0.00
Dump Truck	1	Unpaved	17	95	2.273	0.227	38.64	3.86	1.84	0.18
Dump Truck	1	Paved	10	95	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	16	Paved	58	95	0.003	0.001	3.09	0.76	0.15	0.04
<b>Offsite Total</b>							<b>99.20</b>	<b>10.38</b>	<b>4.71</b>	<b>0.49</b>
<b>Total</b>							<b>99.20</b>	<b>10.38</b>	<b>4.71</b>	<b>0.49</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]



**Table 56**  
**Transmission and Subtransmission Construction Emissions**  
**LST Foundation Removal**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 57**  
**Transmission and Subtransmission Construction Emissions**  
**Install LST Foundations**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	19.83	58.02	138.40	26.53	4.27	4.04	38,552.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	21.53	3.26	
<b>Onsite Total</b>	<b>19.83</b>	<b>58.02</b>	<b>138.40</b>	<b>26.53</b>	<b>25.80</b>	<b>7.30</b>	<b>38552.9</b>
Offsite Motor Vehicle Exhaust	1.41	17.03	42.87	0.10	1.56	0.77	10,414.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2208.90	222.50	
<b>Offsite Total</b>	<b>1.41</b>	<b>17.03</b>	<b>42.87</b>	<b>0.10</b>	<b>2210.46</b>	<b>223.27</b>	<b>10414.6</b>
<b>Total</b>	<b>21.24</b>	<b>75.04</b>	<b>181.28</b>	<b>26.64</b>	<b>2236.26</b>	<b>230.57</b>	<b>48967.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	1.35	5.22	9.74	0.35	0.32	0.29	2,753.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	2.26	0.34	
<b>Onsite Total</b>	<b>1.35</b>	<b>5.22</b>	<b>9.74</b>	<b>0.35</b>	<b>2.58</b>	<b>0.64</b>	<b>2753.8</b>
Offsite Motor Vehicle Exhaust	0.15	1.79	4.50	0.01	0.16	0.08	1,093.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	231.94	23.36	
<b>Offsite Total</b>	<b>0.15</b>	<b>1.79</b>	<b>4.50</b>	<b>0.01</b>	<b>232.10</b>	<b>23.44</b>	<b>1093.5</b>
<b>Total</b>	<b>1.50</b>	<b>7.00</b>	<b>14.24</b>	<b>0.37</b>	<b>234.68</b>	<b>24.08</b>	<b>3847.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	4	210	7
Backhoe/Front Loader	200	4	210	10
Auger Truck	500	4	210	10
Kaman K-MAX	1500	1	25	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes
Auger Truck	500	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Kaman K-MAX	1500	1.129	1.353	7.403	3.755	0.201	0.201	1978.170	0.055	0.063	See note b

<sup>a</sup> From Table 111

<sup>b</sup> All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>  
 PM2.5 emissions assumed equal to PM10

**Table 57**  
**Transmission and Subtransmission Construction Emissions**  
**Install LST Foundations**

SOx emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO2/lbS]

Fuel use = 283.9 kg/hr from Guidance on the Determination of Helicopter Emissions

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

CO2 emissions [lb/hr] = CO2 emission factor [kg/gal] x 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]

CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from

<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>

CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

Fuel use = 283.9 kg/hr from Guidance on the Determination of Helicopter Emissions

Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	3.71	12.40	29.99	0.05	1.08	1.00	5038.31	0.33	0.13	5,085.9
Backhoe/Front Loader	4.09	14.12	31.61	0.08	1.04	0.96	6863.31	0.37	0.18	6,926.3
Auger Truck	4.13	22.02	24.98	0.12	0.74	0.68	12441.16	0.37	0.32	12,548.9
Kaman K-MAX	7.90	9.47	51.82	26.28	1.40	1.40	13847.19	0.38	0.44	13,991.7
<b>Total</b>	<b>19.83</b>	<b>58.02</b>	<b>138.40</b>	<b>26.53</b>	<b>4.27</b>	<b>4.04</b>	<b>38189.97</b>	<b>1.46</b>	<b>1.07</b>	<b>38552.88</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.39	1.30	3.15	0.01	0.11	0.10	529.02	0.04	0.01	534.0
Backhoe/Front Loader	0.43	1.48	3.32	0.01	0.11	0.10	720.65	0.04	0.02	727.3
Auger Truck	0.43	2.31	2.62	0.01	0.08	0.07	1306.32	0.04	0.03	1,317.6
Kaman K-MAX	0.10	0.12	0.65	0.33	0.02	0.02	173.09	0.00	0.01	174.9
<b>Total</b>	<b>1.35</b>	<b>5.22</b>	<b>9.74</b>	<b>0.35</b>	<b>0.32</b>	<b>0.29</b>	<b>2729.08</b>	<b>0.12</b>	<b>0.07</b>	<b>2753.82</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	8	210	N/A	27
Boom/Crane Truck	4	210	N/A	27
Auger Truck	4	210	N/A	27
Water Truck	4	210	N/A	27
Dump Truck	8	210	N/A	27
Concrete Mixer Truck	33	210	N/A	60

**Table 57**  
**Transmission and Subtransmission Construction Emissions**  
**Install LST Foundations**

Worker Commute	28	210	N/A	58
----------------	----	-----	-----	----

<sup>a</sup> Concrete truck based on 68,068 CY concrete (see Earthwork Fugitive PM below) over 210 days and 10 CY/truck load

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88
Boom/Crane Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Auger Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Water Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Dump Truck	0.09	0.62	3.58	0.01	0.12	0.07	764.69	0.00	0.03	772.87
Concrete Mixer Truck	0.84	5.64	32.79	0.07	1.08	0.60	7009.70	0.04	0.24	7084.60
Worker Commute	0.28	8.16	0.89	0.01	0.17	0.01	1132.02	0.07	0.04	1144.94
<b>Offsite Total</b>	<b>1.41</b>	<b>17.03</b>	<b>42.87</b>	<b>0.10</b>	<b>1.56</b>	<b>0.77</b>	<b>10302.83</b>	<b>0.13</b>	<b>0.35</b>	<b>10414.58</b>
<b>Total</b>	<b>1.41</b>	<b>17.03</b>	<b>42.87</b>	<b>0.10</b>	<b>1.56</b>	<b>0.77</b>	<b>10302.83</b>	<b>0.13</b>	<b>0.35</b>	<b>10414.58</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.01	0.18	0.03	0.00	0.00	0.00	26.18	0.00	0.00	26.55
Boom/Crane Truck	0.00	0.03	0.19	0.00	0.01	0.00	40.15	0.00	0.00	40.58

**Table 57**  
**Transmission and Subtransmission Construction Emissions**  
**Install LST Foundations**

Auger Truck	0.00	0.03	0.19	0.00	0.01	0.00	40.15	0.00	0.00	40.58
Water Truck	0.00	0.03	0.19	0.00	0.01	0.00	40.15	0.00	0.00	40.58
Dump Truck	0.01	0.06	0.38	0.00	0.01	0.01	80.29	0.00	0.00	81.15
Concrete Mixer Truck	0.09	0.59	3.44	0.01	0.11	0.06	736.02	0.00	0.03	743.88
Worker Commute	0.03	0.86	0.09	0.00	0.02	0.00	118.86	0.01	0.00	120.22
<b>Offsite Total</b>	<b>0.15</b>	<b>1.79</b>	<b>4.50</b>	<b>0.01</b>	<b>0.16</b>	<b>0.08</b>	<b>1081.80</b>	<b>0.01</b>	<b>0.04</b>	<b>1093.53</b>
<b>Total</b>	<b>0.15</b>	<b>1.79</b>	<b>4.50</b>	<b>0.01</b>	<b>0.16</b>	<b>0.08</b>	<b>1081.80</b>	<b>0.01</b>	<b>0.04</b>	<b>1093.53</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	8	Unpaved	17	210	1.102	0.110	149.83	14.98	15.73	1.57
3/4-Ton Truck, 4x4	8	Paved	10	210	0.003	0.001	0.27	0.07	0.03	0.01
Boom/Crane Truck	4	Unpaved	17	210	2.273	0.227	154.57	15.46	16.23	1.62
Boom/Crane Truck	4	Paved	10	210	0.003	0.001	0.13	0.03	0.01	0.00
Auger Truck	4	Unpaved	17	210	2.273	0.227	154.57	15.46	16.23	1.62
Auger Truck	4	Paved	10	210	0.003	0.001	0.13	0.03	0.01	0.00
Water Truck	4	Unpaved	17	210	2.273	0.227	154.57	15.46	16.23	1.62
Water Truck	4	Paved	10	210	0.003	0.001	0.13	0.03	0.01	0.00
Dump Truck	8	Unpaved	17	210	2.273	0.227	309.13	30.91	32.46	3.25
Dump Truck	8	Paved	10	210	0.003	0.001	0.27	0.07	0.03	0.01
Concrete Mixer Truck	33	Unpaved	17	210	2.273	0.227	1275.17	127.52	133.89	13.39
Concrete Mixer Truck	33	Paved	43	210	0.003	0.001	4.72	1.16	0.50	0.12
Worker Commute	28	Paved	58	210	0.003	0.001	5.41	1.33	0.57	0.14
<b>Offsite Total</b>							<b>2208.90</b>	<b>222.50</b>	<b>231.94</b>	<b>23.36</b>
<b>Total</b>							<b>2208.90</b>	<b>222.50</b>	<b>231.94</b>	<b>23.36</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	324	68068	6.65E-02	1.01E-02	21.53	3.26	2.26	0.34
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00

**Table 57**  
**Transmission and Subtransmission Construction Emissions**  
**Install LST Foundations**

<b>Total</b>						<b>21.53</b>	<b>3.26</b>	<b>2.26</b>	<b>0.34</b>
--------------	--	--	--	--	--	--------------	-------------	-------------	-------------

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on 325 LSTs, 4 foundations/LST, 6 ft. diameter x 50 ft. deep each over 210 days

**Table 58**  
**Transmission and Subtransmission Construction Emissions**  
**LST Steel Haul**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	39.67	62.12	248.50	100.37	7.11	6.96	64,385.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>39.67</b>	<b>62.12</b>	<b>248.50</b>	<b>100.37</b>	<b>7.11</b>	<b>6.96</b>	<b>64385.9</b>
Offsite Motor Vehicle Exhaust	0.56	13.48	5.98	0.03	0.38	0.09	2,780.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	749.92	76.02	
<b>Offsite Total</b>	<b>0.56</b>	<b>13.48</b>	<b>5.98</b>	<b>0.03</b>	<b>750.30</b>	<b>76.11</b>	<b>2780.3</b>
<b>Total</b>	<b>40.23</b>	<b>75.60</b>	<b>254.48</b>	<b>100.40</b>	<b>757.42</b>	<b>83.06</b>	<b>67166.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.67	1.20	4.37	1.46	0.13	0.12	1,076.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.67</b>	<b>1.20</b>	<b>4.37</b>	<b>1.46</b>	<b>0.13</b>	<b>0.12</b>	<b>1076.9</b>
Offsite Motor Vehicle Exhaust	0.02	0.37	0.16	0.00	0.01	0.00	76.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	20.62	2.09	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.37</b>	<b>0.16</b>	<b>0.00</b>	<b>20.63</b>	<b>2.09</b>	<b>76.5</b>
<b>Total</b>	<b>0.68</b>	<b>1.57</b>	<b>4.53</b>	<b>1.46</b>	<b>20.76</b>	<b>2.22</b>	<b>1153.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
R/T Forklift	200	8	55	8
Bell 212	1800	2	29	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
R/T Forklift	200	0.111	0.359	0.919	0.002	0.030	0.028	170.643	0.010	0.004	Rough Terrain Forklifts
Bell 212	1800	2.328	2.797	13.547	7.160	0.370	0.370	3772.296	0.104	0.120	See note b

<sup>a</sup> From Table 111

<sup>b</sup> All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>  
 PM2.5 emissions assumed equal to PM10

SOx emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO2/lbS]

Fuel use = 541.3 kg/hr from Guidance on the Determination of Helicopter Emissions

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

**Table 58  
Transmission and Subtransmission Construction Emissions  
LST Steel Haul**

CO2 emissions [lb/hr] = CO2 emission factor [kg/gal] x 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]  
 CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from  
<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>  
 CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors  
 N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors  
 Fuel use = 541.3 kg/hr from Guidance on the Determination of Helicopter Emissions  
 Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
R/T Forklift	7.08	22.97	58.84	0.12	1.93	1.78	10921.16	0.64	0.28	11,022.5
Bell 212	32.59	39.16	189.66	100.24	5.18	5.18	52812.15	1.46	1.68	53,363.4
<b>Total</b>	<b>39.67</b>	<b>62.12</b>	<b>248.50</b>	<b>100.37</b>	<b>7.11</b>	<b>6.96</b>	<b>63733.30</b>	<b>2.10</b>	<b>1.96</b>	<b>64385.86</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
R/T Forklift	0.19	0.63	1.62	0.00	0.05	0.05	300.33	0.02	0.01	303.1
Bell 212	0.47	0.57	2.75	1.45	0.08	0.08	765.78	0.02	0.02	773.8
<b>Total</b>	<b>0.67</b>	<b>1.20</b>	<b>4.37</b>	<b>1.46</b>	<b>0.13</b>	<b>0.12</b>	<b>1066.11</b>	<b>0.04</b>	<b>0.03</b>	<b>1076.89</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	16	55	N/A	27
Water Truck	2	55	N/A	27
Flat Bed Truck/Trailer	8	55	N/A	27
Worker Commute	32	55	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										



**Table 58  
Transmission and Subtransmission Construction Emissions  
LST Steel Haul**

1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.12	3.39	0.49	0.01	0.04	0.00	498.75	0.03	0.02	505.75
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Flat Bed Truck/Trailer	0.09	0.62	3.58	0.01	0.12	0.07	764.69	0.00	0.03	772.87
Worker Commute	0.33	9.32	1.02	0.02	0.19	0.01	1293.74	0.08	0.04	1308.51
<b>Offsite Total</b>	<b>0.56</b>	<b>13.48</b>	<b>5.98</b>	<b>0.03</b>	<b>0.38</b>	<b>0.09</b>	<b>2748.35</b>	<b>0.11</b>	<b>0.10</b>	<b>2780.34</b>
<b>Total</b>	<b>0.56</b>	<b>13.48</b>	<b>5.98</b>	<b>0.03</b>	<b>0.38</b>	<b>0.09</b>	<b>2748.35</b>	<b>0.11</b>	<b>0.10</b>	<b>2780.34</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.09	0.01	0.00	0.00	0.00	13.72	0.00	0.00	13.91
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	5.26	0.00	0.00	5.31
Flat Bed Truck/Trailer	0.00	0.02	0.10	0.00	0.00	0.00	21.03	0.00	0.00	21.25
Worker Commute	0.01	0.26	0.03	0.00	0.01	0.00	35.58	0.00	0.00	35.98
<b>Offsite Total</b>	<b>0.02</b>	<b>0.37</b>	<b>0.16</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>75.58</b>	<b>0.00</b>	<b>0.00</b>	<b>76.46</b>
<b>Total</b>	<b>0.02</b>	<b>0.37</b>	<b>0.16</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>75.58</b>	<b>0.00</b>	<b>0.00</b>	<b>76.46</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										

**Table 58  
Transmission and Subtransmission Construction Emissions  
LST Steel Haul**

None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	16	Unpaved	17	55	1.311	0.131	356.46	35.65	9.80	0.98
1-Ton Truck, 4x4	16	Paved	10	55	0.003	0.001	0.53	0.13	0.01	0.00
Water Truck	2	Unpaved	17	55	2.273	0.227	77.28	7.73	2.13	0.21
Water Truck	2	Paved	10	55	0.003	0.001	0.07	0.02	0.00	0.00
Flat Bed Truck/Trailer	8	Unpaved	17	55	2.273	0.227	309.13	30.91	8.50	0.85
Flat Bed Truck/Trailer	8	Paved	10	55	0.003	0.001	0.27	0.07	0.01	0.00
Worker Commute	32	Paved	58	55	0.003	0.001	6.18	1.52	0.17	0.04
<b>Offsite Total</b>							<b>749.92</b>	<b>76.02</b>	<b>20.62</b>	<b>2.09</b>
<b>Total</b>							<b>749.92</b>	<b>76.02</b>	<b>20.62</b>	<b>2.09</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 59**  
**Transmission and Subtransmission Construction Emissions**  
**LST Steel Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	19.74	62.88	141.20	26.43	5.69	5.35	28,261.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>19.74</b>	<b>62.88</b>	<b>141.20</b>	<b>26.43</b>	<b>5.69</b>	<b>5.35</b>	<b>28261.1</b>
Offsite Motor Vehicle Exhaust	0.56	15.71	1.98	0.03	0.35	0.02	2,366.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	281.96	29.66	
<b>Offsite Total</b>	<b>0.56</b>	<b>15.71</b>	<b>1.98</b>	<b>0.03</b>	<b>282.31</b>	<b>29.69</b>	<b>2366.3</b>
<b>Total</b>	<b>20.31</b>	<b>78.59</b>	<b>143.18</b>	<b>26.46</b>	<b>288.00</b>	<b>35.04</b>	<b>30627.4</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	4.66	15.78	33.60	5.29	1.40	1.31	6,508.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>4.66</b>	<b>15.78</b>	<b>33.60</b>	<b>5.29</b>	<b>1.40</b>	<b>1.31</b>	<b>6508.4</b>
Offsite Motor Vehicle Exhaust	0.15	4.08	0.52	0.01	0.09	0.01	615.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	73.31	7.71	
<b>Offsite Total</b>	<b>0.15</b>	<b>4.08</b>	<b>0.52</b>	<b>0.01</b>	<b>73.40</b>	<b>7.72</b>	<b>615.2</b>
<b>Total</b>	<b>4.81</b>	<b>19.86</b>	<b>34.12</b>	<b>5.30</b>	<b>74.80</b>	<b>9.03</b>	<b>7123.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	5	520	7
R/T Forklift	125	4	520	7
R/T Crane (L)	300	5	520	10
Kaman K-MAX	1500	1	400	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
R/T Forklift	125	0.108	0.723	0.779	0.001	0.042	0.039	124.788	0.010	0.003	Rough Terrain Forklifts
R/T Crane (L)	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Kaman K-MAX	1500	1.129	1.353	7.403	3.755	0.201	0.201	1978.170	0.055	0.063	See note b

<sup>a</sup> From Table 111

<sup>b</sup> All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>

**Table 59  
Transmission and Subtransmission Construction Emissions  
LST Steel Assembly**

PM2.5 emissions assumed equal to PM10

SOx emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO2/lbS]

Fuel use = 283.9 kg/hr from Guidance on the Determination of Helicopter Emissions

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

CO2 emissions [lb/hr] = CO2 emission factor [kg/gal] x 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]

CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from

<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>

CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

Fuel use = 283.9 kg/hr from Guidance on the Determination of Helicopter Emissions

Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	2.20	11.03	14.03	0.02	1.18	1.08	1641.78	0.20	0.04	1,659.3
R/T Forklift	3.02	20.24	21.80	0.04	1.18	1.09	3494.05	0.27	0.09	3,528.1
R/T Crane (L)	6.62	22.14	53.55	0.09	1.93	1.78	8996.98	0.60	0.23	9,082.0
Kaman K-MAX	7.90	9.47	51.82	26.28	1.40	1.40	13847.19	0.38	0.44	13,991.7
<b>Total</b>	<b>19.74</b>	<b>62.88</b>	<b>141.20</b>	<b>26.43</b>	<b>5.69</b>	<b>5.35</b>	<b>27980.00</b>	<b>1.45</b>	<b>0.81</b>	<b>28261.11</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.57	2.87	3.65	0.01	0.31	0.28	426.86	0.05	0.01	431.4
R/T Forklift	0.79	5.26	5.67	0.01	0.31	0.28	908.45	0.07	0.02	917.3
R/T Crane (L)	1.72	5.76	13.92	0.02	0.50	0.46	2339.21	0.16	0.06	2,361.3
Kaman K-MAX	1.58	1.89	10.36	5.26	0.28	0.28	2769.44	0.08	0.09	2,798.3
<b>Total</b>	<b>4.66</b>	<b>15.78</b>	<b>33.60</b>	<b>5.29</b>	<b>1.40</b>	<b>1.31</b>	<b>6443.97</b>	<b>0.35</b>	<b>0.18</b>	<b>6508.39</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	5	520	N/A	27
1-Ton Truck, 4x4	8	520	N/A	27
Worker Commute	50	520	N/A	58

**Table 59**  
**Transmission and Subtransmission Construction Emissions**  
**LST Steel Assembly**

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.04	1.06	0.15	0.00	0.01	0.00	155.86	0.01	0.01	158.05
1-Ton Truck, 4x4	0.01	0.08	0.24	0.00	0.03	0.01	161.75	0.00	0.01	163.67
Worker Commute	0.51	14.57	1.59	0.02	0.30	0.01	2021.47	0.12	0.07	2044.54
<b>Offsite Total</b>	<b>0.56</b>	<b>15.71</b>	<b>1.98</b>	<b>0.03</b>	<b>0.35</b>	<b>0.02</b>	<b>2339.08</b>	<b>0.13</b>	<b>0.08</b>	<b>2366.26</b>
<b>Total</b>	<b>0.56</b>	<b>15.71</b>	<b>1.98</b>	<b>0.03</b>	<b>0.35</b>	<b>0.02</b>	<b>2339.08</b>	<b>0.13</b>	<b>0.08</b>	<b>2366.26</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.01	0.28	0.04	0.00	0.00	0.00	40.52	0.00	0.00	41.09
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	42.06	0.00	0.00	42.56
Worker Commute	0.13	3.79	0.41	0.01	0.08	0.00	525.58	0.03	0.02	531.58
<b>Offsite Total</b>	<b>0.15</b>	<b>4.08</b>	<b>0.52</b>	<b>0.01</b>	<b>0.09</b>	<b>0.01</b>	<b>608.16</b>	<b>0.03</b>	<b>0.02</b>	<b>615.23</b>
<b>Total</b>	<b>0.15</b>	<b>4.08</b>	<b>0.52</b>	<b>0.01</b>	<b>0.09</b>	<b>0.01</b>	<b>608.16</b>	<b>0.03</b>	<b>0.02</b>	<b>615.23</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 59**  
**Transmission and Subtransmission Construction Emissions**  
**LST Steel Assembly**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	5	Unpaved	17	520	1.102	0.110	93.65	9.36	24.35	2.43
3/4-Ton Truck, 4x4	5	Paved	10	520	0.003	0.001	0.17	0.04	0.04	0.01
1-Ton Truck, 4x4	8	Unpaved	17	520	1.311	0.131	178.23	17.82	46.34	4.63
1-Ton Truck, 4x4	8	Paved	10	520	0.003	0.001	0.27	0.07	0.07	0.02
Worker Commute	50	Paved	58	520	0.003	0.001	9.66	2.37	2.51	0.62
<b>Offsite Total</b>							<b>281.96</b>	<b>29.66</b>	<b>73.31</b>	<b>7.71</b>
<b>Total</b>							<b>281.96</b>	<b>29.66</b>	<b>73.31</b>	<b>7.71</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 60**  
**Transmission and Subtransmission Construction Emissions**  
**LST Erection**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	70.00	104.00	750.85	238.25	17.21	16.99	136,353.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>70.00</b>	<b>104.00</b>	<b>750.85</b>	<b>238.25</b>	<b>17.21</b>	<b>16.99</b>	<b>136353.4</b>
Offsite Motor Vehicle Exhaust	0.74	19.64	4.63	0.04	0.49	0.07	3,353.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	533.56	55.14	
<b>Offsite Total</b>	<b>0.74</b>	<b>19.64</b>	<b>4.63</b>	<b>0.04</b>	<b>534.04</b>	<b>55.21</b>	<b>3353.0</b>
<b>Total</b>	<b>70.74</b>	<b>123.64</b>	<b>755.48</b>	<b>238.29</b>	<b>551.26</b>	<b>72.20</b>	<b>139706.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	7.19	12.37	32.09	9.48	0.98	0.93	6,809.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>7.19</b>	<b>12.37</b>	<b>32.09</b>	<b>9.48</b>	<b>0.98</b>	<b>0.93</b>	<b>6809.5</b>
Offsite Motor Vehicle Exhaust	0.14	3.63	0.86	0.01	0.09	0.01	620.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	98.71	10.20	
<b>Offsite Total</b>	<b>0.14</b>	<b>3.63</b>	<b>0.86</b>	<b>0.01</b>	<b>98.80</b>	<b>10.21</b>	<b>620.3</b>
<b>Total</b>	<b>7.33</b>	<b>16.00</b>	<b>32.95</b>	<b>9.49</b>	<b>99.77</b>	<b>11.15</b>	<b>7429.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	60	4	370	7
R/T Crane (M)	215	4	370	7
R/T Crane (L)	275	4	370	7
Hughes 500 E Helicopter	420	3	275	7
Sikorsky S64	9000	2	50	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	60	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
R/T Crane (M)	215	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
R/T Crane (L)	275	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Hughes 500 E Helicopter	420	1.765	2.199	1.421	1.485	0.044	0.044	782.418	0.022	0.025	See note b
Sikorsky S64	9000	1.786	2.088	47.051	14.783	0.966	0.966	7788.012	0.216	0.248	See note c

<sup>a</sup> From Table 111

**Table 60  
Transmission and Subtransmission Construction Emissions  
LST Erection**

<sup>b</sup> All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>  
PM2.5 emissions assumed equal to PM10

$$\text{SOx emissions [lb/hr]} = \text{Fuel use [kg/hr]} \times 1000 \text{ [g/kg]} / 453.6 \text{ [g/lb]} \times \text{Fuel sulfur [wt. \%]} / 100 \times 2 \text{ [lb SO}_2\text{/lbS]}$$

Fuel use = 112.3 kg/hr from Guidance on the Determination of Helicopter Emissions

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

$$\text{CO}_2 \text{ emissions [lb/hr]} = \text{CO}_2 \text{ emission factor [kg/gal]} \times 1000 \text{ [g/kg]} / 453.6 \text{ [g/lb]} \times \text{Fuel use [kg/hr]} \times 1000 \text{ [g/kg]} / 453.6 \text{ [g/lb]} / \text{Fuel density [lb/gal]}$$

CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from

<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>

CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

Fuel use = 112.3 kg/hr from Guidance on the Determination of Helicopter Emissions

Jet-A density = 6.8 lb/gal

<sup>c</sup> All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>  
PM2.5 emissions assumed equal to PM10

$$\text{SOx emissions [lb/hr]} = \text{Fuel use [kg/hr]} \times 1000 \text{ [g/kg]} / 453.6 \text{ [g/lb]} \times \text{Fuel sulfur [wt. \%]} / 100 \times 2 \text{ [lb SO}_2\text{/lbS]}$$

Fuel use = 1,118 kg/hr from Guidance on the Determination of Helicopter Emissions

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

$$\text{CO}_2 \text{ emissions [lb/hr]} = \text{CO}_2 \text{ emission factor [kg/gal]} \times 1000 \text{ [g/kg]} / 453.6 \text{ [g/lb]} \times \text{Fuel use [kg/hr]} \times 1000 \text{ [g/kg]} / 453.6 \text{ [g/lb]} / \text{Fuel density [lb/gal]}$$

CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from

<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>

CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Action Registry Default Emission Factors

Fuel use = 1,118 kg/hr from Guidance on the Determination of Helicopter Emissions

Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.76	8.82	11.22	0.02	0.94	0.87	1313.43	0.16	0.03	1,327.4
R/T Crane (M)	2.45	7.37	21.07	0.04	0.73	0.67	3137.63	0.22	0.08	3,167.5
R/T Crane (L)	3.71	12.40	29.99	0.05	1.08	1.00	5038.31	0.33	0.13	5,085.9
Hughes 500 E Helicopter	37.08	46.18	29.85	31.19	0.93	0.93	16430.79	0.46	0.52	16,602.3
Sikorsky S64	25.01	29.24	658.72	206.96	13.53	13.53	109032.17	3.02	3.47	110,170.2
<b>Total</b>	<b>70.00</b>	<b>104.00</b>	<b>750.85</b>	<b>238.25</b>	<b>17.21</b>	<b>16.99</b>	<b>134952.32</b>	<b>4.19</b>	<b>4.24</b>	<b>136353.44</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.33	1.63	2.08	0.00	0.17	0.16	242.98	0.03	0.01	245.6
R/T Crane (M)	0.45	1.36	3.90	0.01	0.13	0.12	580.46	0.04	0.02	586.0
R/T Crane (L)	0.69	2.29	5.55	0.01	0.20	0.18	932.09	0.06	0.02	940.9



**Table 60  
Transmission and Subtransmission Construction Emissions  
LST Erection**

Hughes 500 E Helicopter	5.10	6.35	4.10	4.29	0.13	0.13	2259.23	0.06	0.07	2,282.8
Sikorsky S64	0.63	0.73	16.47	5.17	0.34	0.34	2725.80	0.08	0.09	2,754.3
<b>Total</b>	<b>7.19</b>	<b>12.37</b>	<b>32.09</b>	<b>9.48</b>	<b>0.98</b>	<b>0.93</b>	<b>6740.57</b>	<b>0.27</b>	<b>0.20</b>	<b>6809.54</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	8	370	N/A	27
1-Ton Truck, 4x4	8	370	N/A	27
Jet A Fuel Truck	1	370	N/A	27
Water Truck	4	370	N/A	27
Worker Commute	60	370	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Jet A Fuel Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88
1-Ton Truck, 4x4	0.01	0.08	0.24	0.00	0.03	0.01	161.75	0.00	0.01	163.67
Jet A Fuel Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Water Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Worker Commute	0.61	17.48	1.91	0.03	0.36	0.01	2425.76	0.15	0.08	2453.45
<b>Offsite Total</b>	<b>0.74</b>	<b>19.64</b>	<b>4.63</b>	<b>0.04</b>	<b>0.49</b>	<b>0.07</b>	<b>3314.82</b>	<b>0.17</b>	<b>0.11</b>	<b>3353.04</b>

**Table 60  
Transmission and Subtransmission Construction Emissions  
LST Erection**

<b>Total</b>	<b>0.74</b>	<b>19.64</b>	<b>4.63</b>	<b>0.04</b>	<b>0.49</b>	<b>0.07</b>	<b>3314.82</b>	<b>0.17</b>	<b>0.11</b>	<b>3353.04</b>
--------------	-------------	--------------	-------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.01	0.31	0.05	0.00	0.00	0.00	46.13	0.00	0.00	46.78
1-Ton Truck, 4x4	0.00	0.01	0.04	0.00	0.01	0.00	29.92	0.00	0.00	30.28
Jet A Fuel Truck	0.00	0.01	0.08	0.00	0.00	0.00	17.68	0.00	0.00	17.87
Water Truck	0.01	0.06	0.33	0.00	0.01	0.01	70.73	0.00	0.00	71.49
Worker Commute	0.11	3.23	0.35	0.01	0.07	0.00	448.77	0.03	0.01	453.89
<b>Offsite Total</b>	<b>0.14</b>	<b>3.63</b>	<b>0.86</b>	<b>0.01</b>	<b>0.09</b>	<b>0.01</b>	<b>613.24</b>	<b>0.03</b>	<b>0.02</b>	<b>620.31</b>
<b>Total</b>	<b>0.14</b>	<b>3.63</b>	<b>0.86</b>	<b>0.01</b>	<b>0.09</b>	<b>0.01</b>	<b>613.24</b>	<b>0.03</b>	<b>0.02</b>	<b>620.31</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	8	Unpaved	17	370	1.102	0.110	149.83	14.98	27.72	2.77
3/4-Ton Truck, 4x4	8	Paved	10	370	0.003	0.001	0.27	0.07	0.05	0.01
1-Ton Truck, 4x4	8	Unpaved	17	370	1.311	0.131	178.23	17.82	32.97	3.30
1-Ton Truck, 4x4	8	Paved	10	370	0.003	0.001	0.27	0.07	0.05	0.01
Jet A Fuel Truck	1	Unpaved	17	370	2.273	0.227	38.64	3.86	7.15	0.71
Jet A Fuel Truck	1	Paved	10	370	0.003	0.001	0.03	0.01	0.01	0.00
Water Truck	4	Unpaved	17	370	2.273	0.227	154.57	15.46	28.59	2.86
Water Truck	4	Paved	10	370	0.003	0.001	0.13	0.03	0.02	0.01
Worker Commute	60	Paved	58	370	0.003	0.001	11.59	2.84	2.14	0.53
<b>Offsite Total</b>							<b>533.56</b>	<b>55.14</b>	<b>98.71</b>	<b>10.20</b>
<b>Total</b>							<b>533.56</b>	<b>55.14</b>	<b>98.71</b>	<b>10.20</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 60**  
**Transmission and Subtransmission Construction Emissions**  
**LST Erection**

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 61**  
**Transmission and Subtransmission Construction Emissions**  
**Install TSP Foundations**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	5.96	24.27	43.29	0.12	1.43	1.32	12,280.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	9.84	1.49	
<b>Onsite Total</b>	<b>5.96</b>	<b>24.27</b>	<b>43.29</b>	<b>0.12</b>	<b>11.27</b>	<b>2.81</b>	<b>12280.6</b>
Offsite Motor Vehicle Exhaust	0.64	7.94	19.05	0.05	0.69	0.34	4,673.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1006.06	101.32	
<b>Offsite Total</b>	<b>0.64</b>	<b>7.94</b>	<b>19.05</b>	<b>0.05</b>	<b>1006.76</b>	<b>101.66</b>	<b>4673.5</b>
<b>Total</b>	<b>6.60</b>	<b>32.22</b>	<b>62.34</b>	<b>0.17</b>	<b>1018.03</b>	<b>104.47</b>	<b>16954.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	1.02	4.00	7.49	0.02	0.25	0.23	1,988.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.43	0.07	
<b>Onsite Total</b>	<b>1.02</b>	<b>4.00</b>	<b>7.49</b>	<b>0.02</b>	<b>0.68</b>	<b>0.30</b>	<b>1988.9</b>
Offsite Motor Vehicle Exhaust	0.10	1.35	2.78	0.01	0.10	0.05	705.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	155.68	15.69	
<b>Offsite Total</b>	<b>0.10</b>	<b>1.35</b>	<b>2.78</b>	<b>0.01</b>	<b>155.79</b>	<b>15.74</b>	<b>705.6</b>
<b>Total</b>	<b>1.12</b>	<b>5.35</b>	<b>10.27</b>	<b>0.03</b>	<b>156.47</b>	<b>16.03</b>	<b>2694.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	2	375	7
Backhoe/Front Loader	200	2	375	10
Auger Truck	500	2	275	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes
Auger Truck	500	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	1.85	6.20	14.99	0.02	0.54	0.50	2519.15	0.17	0.07	2,543.0

**Table 61**  
**Transmission and Subtransmission Construction Emissions**  
**Install TSP Foundations**

Backhoe/Front Loader	2.05	7.06	15.80	0.04	0.52	0.48	3431.66	0.18	0.09	3,463.1
Auger Truck	2.06	11.01	12.49	0.06	0.37	0.34	6220.58	0.19	0.16	6,274.5
<b>Total</b>	<b>5.96</b>	<b>24.27</b>	<b>43.29</b>	<b>0.12</b>	<b>1.43</b>	<b>1.32</b>	<b>12171.39</b>	<b>0.54</b>	<b>0.32</b>	<b>12280.57</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.35	1.16	2.81	0.00	0.10	0.09	472.34	0.03	0.01	476.8
Backhoe/Front Loader	0.38	1.32	2.96	0.01	0.10	0.09	643.44	0.03	0.02	649.3
Auger Truck	0.28	1.51	1.72	0.01	0.05	0.05	855.33	0.03	0.02	862.7
<b>Total</b>	<b>1.02</b>	<b>4.00</b>	<b>7.49</b>	<b>0.02</b>	<b>0.25</b>	<b>0.23</b>	<b>1971.11</b>	<b>0.09</b>	<b>0.05</b>	<b>1988.88</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	375	N/A	27
Boom/Crane Truck	2	375	N/A	27
Auger Truck	2	275	N/A	27
Water Truck	2	375	N/A	27
Dump Truck	2	375	N/A	27
Concrete Mixer Truck	15	275	N/A	60
Worker Commute	12	375	N/A	58

<sup>a</sup> Concrete mixer trucks based on 148 CY/TSP, 1 TSP/day and 10 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Table 61**  
**Transmission and Subtransmission Construction Emissions**  
**Install TSP Foundations**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.05	1.27	0.19	0.00	0.02	0.00	187.03	0.01	0.01	189.66
Boom/Crane Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Auger Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Dump Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Concrete Mixer Truck	0.38	2.56	14.91	0.03	0.49	0.27	3186.23	0.02	0.11	3220.27
Worker Commute	0.12	3.50	0.38	0.01	0.07	0.00	485.15	0.03	0.02	490.69
<b>Offsite Total</b>	<b>0.64</b>	<b>7.94</b>	<b>19.05</b>	<b>0.05</b>	<b>0.69</b>	<b>0.34</b>	<b>4623.10</b>	<b>0.06</b>	<b>0.16</b>	<b>4673.48</b>
<b>Total</b>	<b>0.64</b>	<b>7.94</b>	<b>19.05</b>	<b>0.05</b>	<b>0.69</b>	<b>0.34</b>	<b>4623.10</b>	<b>0.06</b>	<b>0.16</b>	<b>4673.48</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.01	0.24	0.03	0.00	0.00	0.00	35.07	0.00	0.00	35.56
Boom/Crane Truck	0.00	0.03	0.17	0.00	0.01	0.00	35.85	0.00	0.00	36.23
Auger Truck	0.00	0.02	0.12	0.00	0.00	0.00	26.29	0.00	0.00	26.57
Water Truck	0.00	0.03	0.17	0.00	0.01	0.00	35.85	0.00	0.00	36.23
Dump Truck	0.00	0.03	0.17	0.00	0.01	0.00	35.85	0.00	0.00	36.23
Concrete Mixer Truck	0.05	0.35	2.05	0.00	0.07	0.04	438.11	0.00	0.01	442.79
Worker Commute	0.02	0.66	0.07	0.00	0.01	0.00	90.97	0.01	0.00	92.00
<b>Offsite Total</b>	<b>0.10</b>	<b>1.35</b>	<b>2.78</b>	<b>0.01</b>	<b>0.10</b>	<b>0.05</b>	<b>697.96</b>	<b>0.01</b>	<b>0.02</b>	<b>705.60</b>
<b>Total</b>	<b>0.10</b>	<b>1.35</b>	<b>2.78</b>	<b>0.01</b>	<b>0.10</b>	<b>0.05</b>	<b>697.96</b>	<b>0.01</b>	<b>0.02</b>	<b>705.60</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00

**Table 61**  
**Transmission and Subtransmission Construction Emissions**  
**Install TSP Foundations**

<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	6	Unpaved	17	375	1.102	0.110	112.38	11.24	21.07	2.11
3/4-Ton Truck, 4x4	6	Paved	10	375	0.003	0.001	0.20	0.05	0.04	0.01
Boom/Crane Truck	2	Unpaved	17	375	2.273	0.227	77.28	7.73	14.49	1.45
Boom/Crane Truck	2	Paved	10	375	0.003	0.001	0.07	0.02	0.01	0.00
Auger Truck	2	Unpaved	17	275	2.273	0.227	77.28	7.73	10.63	1.06
Auger Truck	2	Paved	10	275	0.003	0.001	0.07	0.02	0.01	0.00
Water Truck	2	Unpaved	17	375	2.273	0.227	77.28	7.73	14.49	1.45
Water Truck	2	Paved	10	375	0.003	0.001	0.07	0.02	0.01	0.00
Dump Truck	2	Unpaved	17	375	2.273	0.227	77.28	7.73	14.49	1.45
Dump Truck	2	Paved	10	375	0.003	0.001	0.07	0.02	0.01	0.00
Concrete Mixer Truck	15	Unpaved	17	275	2.273	0.227	579.62	57.96	79.70	7.97
Concrete Mixer Truck	15	Paved	43	275	0.003	0.001	2.15	0.53	0.30	0.07
Worker Commute	12	Paved	58	375	0.003	0.001	2.32	0.57	0.43	0.11
<b>Offsite Total</b>							<b>1006.06</b>	<b>101.32</b>	<b>155.68</b>	<b>15.69</b>
<b>Total</b>							<b>1006.06</b>	<b>101.32</b>	<b>155.68</b>	<b>15.69</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling <sup>d</sup>	CY	148	12978	6.65E-02	1.01E-02	9.84	1.49	0.43	0.07
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>9.84</b>	<b>1.49</b>	<b>0.43</b>	<b>0.07</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Daily based on 1 TSP, 13 ft. diameter x 30 ft. deep; total based on 88 TSPs

**Table 62  
Transmission and Subtransmission Construction Emissions  
TSP Haul**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.06	3.54	8.57	0.01	0.31	0.28	1,453.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.06</b>	<b>3.54</b>	<b>8.57</b>	<b>0.01</b>	<b>0.31</b>	<b>0.28</b>	<b>1453.1</b>
Offsite Motor Vehicle Exhaust	0.10	1.90	1.98	0.01	0.09	0.03	613.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	193.00	19.44	
<b>Offsite Total</b>	<b>0.10</b>	<b>1.90</b>	<b>1.98</b>	<b>0.01</b>	<b>193.09</b>	<b>19.47</b>	<b>613.2</b>
<b>Total</b>	<b>1.16</b>	<b>5.44</b>	<b>10.55</b>	<b>0.02</b>	<b>193.39</b>	<b>19.76</b>	<b>2066.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.04	0.14	0.34	0.00	0.01	0.01	58.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.04</b>	<b>0.14</b>	<b>0.34</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>58.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.08	0.00	0.00	0.00	24.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.72	0.78	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>0.00</b>	<b>7.72</b>	<b>0.78</b>	<b>24.5</b>
<b>Total</b>	<b>0.05</b>	<b>0.22</b>	<b>0.42</b>	<b>0.00</b>	<b>7.74</b>	<b>0.79</b>	<b>82.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	1	80	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------



**Table 62**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Haul**

Boom/Crane Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
<b>Total</b>	<b>1.06</b>	<b>3.54</b>	<b>8.57</b>	<b>0.01</b>	<b>0.31</b>	<b>0.28</b>	<b>1439.52</b>	<b>0.10</b>	<b>0.04</b>	<b>1453.12</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.04	0.14	0.34	0.00	0.01	0.01	57.58	0.00	0.00	58.1
<b>Total</b>	<b>0.04</b>	<b>0.14</b>	<b>0.34</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>57.58</b>	<b>0.00</b>	<b>0.00</b>	<b>58.12</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	2	80	N/A	27
Boom/Crane Truck	1	80	N/A	27
Water Truck	1	80	N/A	27
Flat Bed Pole Truck	2	80	N/A	27
Worker Commute	4	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Pole Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

**Table 62**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Haul**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.42	0.06	0.00	0.01	0.00	62.34	0.00	0.00	63.22
Boom/Crane Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Pole Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.10</b>	<b>1.90</b>	<b>1.98</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>606.41</b>	<b>0.02</b>	<b>0.02</b>	<b>613.21</b>
<b>Total</b>	<b>0.10</b>	<b>1.90</b>	<b>1.98</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>606.41</b>	<b>0.02</b>	<b>0.02</b>	<b>613.21</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	2.49	0.00	0.00	2.53
Boom/Crane Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.82	0.00	0.00	3.86
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.82	0.00	0.00	3.86
Flat Bed Pole Truck	0.00	0.01	0.04	0.00	0.00	0.00	7.65	0.00	0.00	7.73
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.47	0.00	0.00	6.54
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>24.26</b>	<b>0.00</b>	<b>0.00</b>	<b>24.53</b>
<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>24.26</b>	<b>0.00</b>	<b>0.00</b>	<b>24.53</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 62**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Haul**

<b>Offsite</b>										
3/4-Ton Truck, 4x4	2	Unpaved	17	80	1.102	0.110	37.46	3.75	1.50	0.15
3/4-Ton Truck, 4x4	2	Paved	10	80	0.003	0.001	0.07	0.02	0.00	0.00
Boom/Crane Truck	1	Unpaved	17	80	2.273	0.227	38.64	3.86	1.55	0.15
Boom/Crane Truck	1	Paved	10	80	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	17	80	2.273	0.227	38.64	3.86	1.55	0.15
Water Truck	1	Paved	10	80	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Pole Truck	2	Unpaved	17	80	2.273	0.227	77.28	7.73	3.09	0.31
Flat Bed Pole Truck	2	Paved	10	80	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	80	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>193.00</b>	<b>19.44</b>	<b>7.72</b>	<b>0.78</b>
<b>Total</b>							<b>193.00</b>	<b>19.44</b>	<b>7.72</b>	<b>0.78</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 63  
Transmission and Subtransmission Construction Emissions  
TSP Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.91	14.97	29.71	0.05	1.42	1.30	4,667.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4667.8</b>
Offsite Motor Vehicle Exhaust	0.29	6.88	2.73	0.02	0.21	0.05	1,434.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	404.62	41.05	
<b>Offsite Total</b>	<b>0.29</b>	<b>6.88</b>	<b>2.73</b>	<b>0.02</b>	<b>404.83</b>	<b>41.09</b>	<b>1434.9</b>
<b>Total</b>	<b>4.20</b>	<b>21.85</b>	<b>32.43</b>	<b>0.06</b>	<b>406.25</b>	<b>42.39</b>	<b>6102.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.34	0.67	0.00	0.03	0.03	105.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.09</b>	<b>0.34</b>	<b>0.67</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>105.0</b>
Offsite Motor Vehicle Exhaust	0.01	0.15	0.06	0.00	0.00	0.00	32.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	9.10	0.92	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.06</b>	<b>0.00</b>	<b>9.11</b>	<b>0.92</b>	<b>32.3</b>
<b>Total</b>	<b>0.09</b>	<b>0.49</b>	<b>0.73</b>	<b>0.00</b>	<b>9.14</b>	<b>0.95</b>	<b>137.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	3	45	6
Boom/Crane Truck	350	3	45	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 63**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Assembly**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.13	5.67	7.21	0.01	0.60	0.56	844.35	0.10	0.02	853.4
Boom/Crane Truck	2.78	9.30	22.49	0.04	0.81	0.75	3778.73	0.25	0.10	3,814.4
<b>Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4623.08</b>	<b>0.35</b>	<b>0.12</b>	<b>4667.80</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.03	0.13	0.16	0.00	0.01	0.01	19.00	0.00	0.00	19.2
Boom/Crane Truck	0.06	0.21	0.51	0.00	0.02	0.02	85.02	0.01	0.00	85.8
<b>Total</b>	<b>0.09</b>	<b>0.34</b>	<b>0.67</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>104.02</b>	<b>0.01</b>	<b>0.00</b>	<b>105.03</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	45	N/A	27
1-Ton Truck, 4x4	6	45	N/A	27
Boom/Crane Truck	3	45	N/A	27
Water Truck	1	45	N/A	27
Worker Commute	18	45	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Table 63**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Assembly**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.05	1.27	0.19	0.00	0.02	0.00	187.03	0.01	0.01	189.66
1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Boom/Crane Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.29</b>	<b>6.88</b>	<b>2.73</b>	<b>0.02</b>	<b>0.21</b>	<b>0.05</b>	<b>1418.42</b>	<b>0.06</b>	<b>0.05</b>	<b>1434.88</b>
<b>Total</b>	<b>0.29</b>	<b>6.88</b>	<b>2.73</b>	<b>0.02</b>	<b>0.21</b>	<b>0.05</b>	<b>1418.42</b>	<b>0.06</b>	<b>0.05</b>	<b>1434.88</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.03	0.00	0.00	0.00	0.00	4.21	0.00	0.00	4.27
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	2.73	0.00	0.00	2.76
Boom/Crane Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.45	0.00	0.00	6.52
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.15	0.00	0.00	2.17
Worker Commute	0.00	0.12	0.01	0.00	0.00	0.00	16.37	0.00	0.00	16.56
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>31.91</b>	<b>0.00</b>	<b>0.00</b>	<b>32.28</b>
<b>Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>31.91</b>	<b>0.00</b>	<b>0.00</b>	<b>32.28</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00

**Table 63  
Transmission and Subtransmission Construction Emissions  
TSP Assembly**

<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	6	Unpaved	17	45	1.102	0.110	112.38	11.24	2.53	0.25
3/4-Ton Truck, 4x4	6	Paved	10	45	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Truck, 4x4	6	Unpaved	17	45	1.311	0.131	133.67	13.37	3.01	0.30
1-Ton Truck, 4x4	6	Paved	10	45	0.003	0.001	0.20	0.05	0.00	0.00
Boom/Crane Truck	3	Unpaved	17	45	2.273	0.227	115.92	11.59	2.61	0.26
Boom/Crane Truck	3	Paved	10	45	0.003	0.001	0.10	0.02	0.00	0.00
Water Truck	1	Unpaved	17	45	2.273	0.227	38.64	3.86	0.87	0.09
Water Truck	1	Paved	10	45	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	18	Paved	58	45	0.003	0.001	3.48	0.85	0.08	0.02
<b>Offsite Total</b>							<b>404.62</b>	<b>41.05</b>	<b>9.10</b>	<b>0.92</b>
<b>Total</b>							<b>404.62</b>	<b>41.05</b>	<b>9.10</b>	<b>0.92</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 64  
Transmission and Subtransmission Construction Emissions  
TSP Erection**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.91	14.97	29.71	0.05	1.42	1.30	4,667.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4667.8</b>
Offsite Motor Vehicle Exhaust	0.25	6.65	1.39	0.01	0.16	0.02	1,145.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	288.60	29.43	
<b>Offsite Total</b>	<b>0.25</b>	<b>6.65</b>	<b>1.39</b>	<b>0.01</b>	<b>288.76</b>	<b>29.45</b>	<b>1145.1</b>
<b>Total</b>	<b>4.16</b>	<b>21.62</b>	<b>31.09</b>	<b>0.06</b>	<b>290.18</b>	<b>30.75</b>	<b>5812.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.34	0.67	0.00	0.03	0.03	105.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.09</b>	<b>0.34</b>	<b>0.67</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>105.0</b>
Offsite Motor Vehicle Exhaust	0.01	0.15	0.03	0.00	0.00	0.00	25.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	6.49	0.66	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.03</b>	<b>0.00</b>	<b>6.50</b>	<b>0.66</b>	<b>25.8</b>
<b>Total</b>	<b>0.09</b>	<b>0.49</b>	<b>0.70</b>	<b>0.00</b>	<b>6.53</b>	<b>0.69</b>	<b>130.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	3	45	6
R/T Crane (L)	350	3	45	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
R/T Crane (L)	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**



**Table 64**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Erection**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.13	5.67	7.21	0.01	0.60	0.56	844.35	0.10	0.02	853.4
R/T Crane (L)	2.78	9.30	22.49	0.04	0.81	0.75	3778.73	0.25	0.10	3,814.4
<b>Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4623.08</b>	<b>0.35</b>	<b>0.12</b>	<b>4667.80</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.03	0.13	0.16	0.00	0.01	0.01	19.00	0.00	0.00	19.2
R/T Crane (L)	0.06	0.21	0.51	0.00	0.02	0.02	85.02	0.01	0.00	85.8
<b>Total</b>	<b>0.09</b>	<b>0.34</b>	<b>0.67</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>104.02</b>	<b>0.01</b>	<b>0.00</b>	<b>105.03</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	45	N/A	27
1-Ton Truck, 4x4	6	45	N/A	27
Water Truck	1	45	N/A	27
Worker Commute	18	45	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

**Table 64**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Erection**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.05	1.27	0.19	0.00	0.02	0.00	187.03	0.01	0.01	189.66
1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.25</b>	<b>6.65</b>	<b>1.39</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>1131.66</b>	<b>0.06</b>	<b>0.04</b>	<b>1145.05</b>
<b>Total</b>	<b>0.25</b>	<b>6.65</b>	<b>1.39</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>1131.66</b>	<b>0.06</b>	<b>0.04</b>	<b>1145.05</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.03	0.00	0.00	0.00	0.00	4.21	0.00	0.00	4.27
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	2.73	0.00	0.00	2.76
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.15	0.00	0.00	2.17
Worker Commute	0.00	0.12	0.01	0.00	0.00	0.00	16.37	0.00	0.00	16.56
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>25.46</b>	<b>0.00</b>	<b>0.00</b>	<b>25.76</b>
<b>Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>25.46</b>	<b>0.00</b>	<b>0.00</b>	<b>25.76</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	6	Unpaved	17	45	1.102	0.110	112.38	11.24	2.53	0.25
3/4-Ton Truck, 4x4	6	Paved	10	45	0.003	0.001	0.20	0.05	0.00	0.00

**Table 64**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Erection**

1-Ton Truck, 4x4	6	Unpaved	17	45	1.311	0.131	133.67	13.37	3.01	0.30
1-Ton Truck, 4x4	6	Paved	10	45	0.003	0.001	0.20	0.05	0.00	0.00
Water Truck	1	Unpaved	17	45	2.273	0.227	38.64	3.86	0.87	0.09
Water Truck	1	Paved	10	45	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	18	Paved	58	45	0.003	0.001	3.48	0.85	0.08	0.02
<b>Offsite Total</b>							<b>288.60</b>	<b>29.43</b>	<b>6.49</b>	<b>0.66</b>
<b>Total</b>							<b>288.60</b>	<b>29.43</b>	<b>6.49</b>	<b>0.66</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 65**  
**Transmission and Subtransmission Construction Emissions**  
**Install/Transfer Conductor**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	46.32	116.44	206.41	21.16	7.11	6.59	48,424.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>46.32</b>	<b>116.44</b>	<b>206.41</b>	<b>21.16</b>	<b>7.11</b>	<b>6.59</b>	<b>48424.3</b>
Offsite Motor Vehicle Exhaust	1.86	49.80	11.50	0.10	1.22	0.16	8,262.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	758.01	80.54	
<b>Offsite Total</b>	<b>1.86</b>	<b>49.80</b>	<b>11.50</b>	<b>0.10</b>	<b>759.23</b>	<b>80.70</b>	<b>8262.3</b>
<b>Total</b>	<b>48.19</b>	<b>166.24</b>	<b>217.91</b>	<b>21.26</b>	<b>766.34</b>	<b>87.29</b>	<b>56686.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	5.20	12.06	22.31	2.53	0.75	0.69	5,209.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>5.20</b>	<b>12.06</b>	<b>22.31</b>	<b>2.53</b>	<b>0.75</b>	<b>0.69</b>	<b>5209.1</b>
Offsite Motor Vehicle Exhaust	0.28	7.45	1.63	0.01	0.18	0.02	1,219.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	104.78	11.19	
<b>Offsite Total</b>	<b>0.28</b>	<b>7.45</b>	<b>1.63</b>	<b>0.01</b>	<b>104.95</b>	<b>11.21</b>	<b>1219.3</b>
<b>Total</b>	<b>5.48</b>	<b>19.51</b>	<b>23.94</b>	<b>2.55</b>	<b>105.70</b>	<b>11.90</b>	<b>6428.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Manlift/Bucket Truck	350	3	300	10
Boom/Crane Truck	350	3	300	10
R/T Crane (M)	215	3	300	10
Sock Line Puller	300	2	80	10
Bull Wheel Puller	350	2	160	10
Static Truck/Tensioner	350	2	300	10
Spacing Cart	10	4	80	10
Backhoe/Front Loader	125	2	60	8
D8 Cat	350	1	60	8
Sag Cat w/ 2 Winches	350	1	60	10
Hughes 500 E Helicopter	420	2	240	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

**Table 65**  
**Transmission and Subtransmission Construction Emissions**  
**Install/Transfer Conductor**

R/T Crane (M)	215	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
Sock Line Puller	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Bull Wheel Puller	350	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Static Truck/Tensioner	350	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Spacing Cart	10	0.012	0.062	0.074	0.000	0.003	0.003	10.098	0.001	0.000	Other Construction Equipment
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
D8 Cat	350	0.218	0.790	1.742	0.003	0.067	0.061	258.997	0.020	0.007	Crawler Tractors
Sag Cat w/ 2 Winches	350	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Hughes 500 E Helicopter	420	1.765	2.199	1.421	1.485	0.044	0.044	782.418	0.022	0.025	See note b

a From Table 111

b All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>

PM2.5 emissions assumed equal to PM10

SOx emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO2/lbS]

Fuel use = 112.3 kg/hr from Guidance on the Determination of Helicopter Emissions

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

CO2 emissions [lb/hr] = CO2 emission factor [kg/gal] x 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]

CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from

<http://www.theclimaterestry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>

CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

Fuel use = 112.3 kg/hr from Guidance on the Determination of Helicopter Emissions

Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Manlift/Bucket Truck	2.85	12.29	33.21	0.06	0.99	0.91	6379.95	0.26	0.17	6,436.6
Boom/Crane Truck	3.97	13.28	32.13	0.05	1.16	1.07	5398.19	0.36	0.14	5,449.2
R/T Crane (M)	2.62	7.89	22.57	0.04	0.78	0.71	3361.74	0.24	0.09	3,393.8
Sock Line Puller	2.48	9.73	20.80	0.05	0.70	0.64	5080.20	0.22	0.13	5,125.8
Bull Wheel Puller	2.48	9.73	20.80	0.05	0.70	0.64	5080.20	0.22	0.13	5,125.8
Static Truck/Tensioner	2.48	9.73	20.80	0.05	0.70	0.64	5080.20	0.22	0.13	5,125.8
Spacing Cart	0.47	2.47	2.94	0.01	0.12	0.11	403.93	0.04	0.01	408.1
Backhoe/Front Loader	1.26	9.35	8.91	0.02	0.47	0.43	1620.73	0.11	0.04	1,636.2
D8 Cat	1.74	6.32	13.93	0.02	0.53	0.49	2071.97	0.16	0.05	2,092.0
Sag Cat w/ 2 Winches	1.24	4.86	10.40	0.02	0.35	0.32	2540.10	0.11	0.07	2,562.9
Hughes 500 E Helicopter	24.72	30.78	19.90	20.79	0.62	0.62	10953.86	0.30	0.35	11,068.2
<b>Total</b>	<b>46.32</b>	<b>116.44</b>	<b>206.41</b>	<b>21.16</b>	<b>7.11</b>	<b>6.59</b>	<b>47971.08</b>	<b>2.25</b>	<b>1.31</b>	<b>48424.31</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Manlift/Bucket Truck	0.43	1.84	4.98	0.01	0.15	0.14	956.99	0.04	0.02	965.5
Boom/Crane Truck	0.60	1.99	4.82	0.01	0.17	0.16	809.73	0.05	0.02	817.4

**Table 65**  
**Transmission and Subtransmission Construction Emissions**  
**Install/Transfer Conductor**

R/T Crane (M)	0.39	1.18	3.39	0.01	0.12	0.11	504.26	0.04	0.01	509.1
Sock Line Puller	0.10	0.39	0.83	0.00	0.03	0.03	203.21	0.01	0.01	205.0
Bull Wheel Puller	0.20	0.78	1.66	0.00	0.06	0.05	406.42	0.02	0.01	410.1
Static Truck/Tensioner	0.37	1.46	3.12	0.01	0.10	0.10	762.03	0.03	0.02	768.9
Spacing Cart	0.02	0.10	0.12	0.00	0.00	0.00	16.16	0.00	0.00	16.3
Backhoe/Front Loader	0.04	0.28	0.27	0.00	0.01	0.01	48.62	0.00	0.00	49.1
D8 Cat	0.05	0.19	0.42	0.00	0.02	0.01	62.16	0.00	0.00	62.8
Sag Cat w/ 2 Winches	0.04	0.15	0.31	0.00	0.01	0.01	76.20	0.00	0.00	76.9
Hughes 500 E Helicopter	2.97	3.69	2.39	2.50	0.07	0.07	1314.46	0.04	0.04	1,328.2
<b>Total</b>	<b>5.20</b>	<b>12.06</b>	<b>22.31</b>	<b>2.53</b>	<b>0.75</b>	<b>0.69</b>	<b>5160.24</b>	<b>0.24</b>	<b>0.14</b>	<b>5209.14</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	3	300	N/A	27
1-Ton Truck, 4x4	6	300	N/A	27
Manlift/Bucket Truck	3	300	N/A	27
Boom/Crane Truck	3	300	N/A	27
Dump Truck	2	300	N/A	27
Wire Truck/Trailer	3	206	N/A	27
Static Truck/Tensioner	2	300	N/A	2
Splicing Rig	2	80	N/A	2
Splicing Lab	2	80	N/A	2
Lowboy Truck/Trailer	3	300	N/A	2
Fuel, Helicopter Support Truck	2	240	N/A	27
Worker Commute	165	300	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Wire Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Static Truck/Tensioner	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Splicing Rig	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

**Table 65**  
**Transmission and Subtransmission Construction Emissions**  
**Install/Transfer Conductor**

Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Fuel, Helicopter Support Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.64	0.09	0.00	0.01	0.00	93.51	0.01	0.00	94.83
1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Manlift/Bucket Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Boom/Crane Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Dump Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Wire Truck/Trailer	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Static Truck/Tensioner	0.00	0.01	0.07	0.00	0.00	0.00	14.16	0.00	0.00	14.31
Splicing Rig	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	3.03
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	3.03
Lowboy Truck/Trailer	0.00	0.02	0.10	0.00	0.00	0.00	21.24	0.00	0.00	21.47
Fuel, Helicopter Support Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	1.68	48.07	5.24	0.08	0.99	0.04	6670.84	0.41	0.22	6746.98
<b>Offsite Total</b>	<b>1.86</b>	<b>49.80</b>	<b>11.50</b>	<b>0.10</b>	<b>1.22</b>	<b>0.16</b>	<b>8169.69</b>	<b>0.42</b>	<b>0.27</b>	<b>8262.31</b>
<b>Total</b>	<b>1.86</b>	<b>49.80</b>	<b>11.50</b>	<b>0.10</b>	<b>1.22</b>	<b>0.16</b>	<b>8169.69</b>	<b>0.42</b>	<b>0.27</b>	<b>8262.31</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.10	0.01	0.00	0.00	0.00	14.03	0.00	0.00	14.22
1-Ton Truck, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	18.20	0.00	0.00	18.41
Manlift/Bucket Truck	0.01	0.03	0.20	0.00	0.01	0.00	43.01	0.00	0.00	43.47
Boom/Crane Truck	0.01	0.03	0.20	0.00	0.01	0.00	43.01	0.00	0.00	43.47
Dump Truck	0.00	0.02	0.13	0.00	0.00	0.00	28.68	0.00	0.00	28.98
Wire Truck/Trailer	0.00	0.02	0.14	0.00	0.00	0.00	29.54	0.00	0.00	29.85
Static Truck/Tensioner	0.00	0.00	0.01	0.00	0.00	0.00	2.12	0.00	0.00	2.15
Splicing Rig	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.12
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.12
Lowboy Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	3.19	0.00	0.00	3.22

**Table 65**  
**Transmission and Subtransmission Construction Emissions**  
**Install/Transfer Conductor**

Fuel, Helicopter Support Truck	0.00	0.02	0.11	0.00	0.00	0.00	22.94	0.00	0.00	23.19
Worker Commute	0.25	7.21	0.79	0.01	0.15	0.01	1000.63	0.06	0.03	1012.05
<b>Offsite Total</b>	<b>0.28</b>	<b>7.45</b>	<b>1.63</b>	<b>0.01</b>	<b>0.18</b>	<b>0.02</b>	<b>1205.58</b>	<b>0.06</b>	<b>0.04</b>	<b>1219.26</b>
<b>Total</b>	<b>0.28</b>	<b>7.45</b>	<b>1.63</b>	<b>0.01</b>	<b>0.18</b>	<b>0.02</b>	<b>1205.58</b>	<b>0.06</b>	<b>0.04</b>	<b>1219.26</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	3	Unpaved	17	300	1.102	0.110	56.19	5.62	8.43	0.84
3/4-Ton Truck, 4x4	3	Paved	10	300	0.003	0.001	0.10	0.02	0.01	0.00
1-Ton Truck, 4x4	6	Unpaved	17	300	1.311	0.131	133.67	13.37	20.05	2.01
1-Ton Truck, 4x4	6	Paved	10	300	0.003	0.001	0.20	0.05	0.03	0.01
Manlift/Bucket Truck	3	Unpaved	17	300	2.273	0.227	115.92	11.59	17.39	1.74
Manlift/Bucket Truck	3	Paved	10	300	0.003	0.001	0.10	0.02	0.01	0.00
Boom/Crane Truck	3	Unpaved	17	300	2.273	0.227	115.92	11.59	17.39	1.74
Boom/Crane Truck	3	Paved	10	300	0.003	0.001	0.10	0.02	0.01	0.00
Dump Truck	2	Unpaved	17	300	2.273	0.227	77.28	7.73	11.59	1.16
Dump Truck	2	Paved	10	300	0.003	0.001	0.07	0.02	0.01	0.00
Wire Truck/Trailer	3	Unpaved	17	206	2.273	0.227	115.92	11.59	11.94	1.19
Wire Truck/Trailer	3	Paved	10	206	0.003	0.001	0.10	0.02	0.01	0.00
Static Truck/Tensioner	2	Unpaved	2	300	2.273	0.227	9.09	0.91	1.36	0.14
Static Truck/Tensioner	2	Paved	0	300	0.003	0.001	0.00	0.00	0.00	0.00
Splicing Rig	2	Unpaved	2	80	1.311	0.131	5.24	0.52	0.21	0.02
Splicing Rig	2	Paved	0	80	0.003	0.001	0.00	0.00	0.00	0.00
Splicing Lab	2	Unpaved	2	80	1.311	0.131	5.24	0.52	0.21	0.02
Splicing Lab	2	Paved	0	80	0.003	0.001	0.00	0.00	0.00	0.00
Lowboy Truck/Trailer	3	Unpaved	2	300	2.273	0.227	13.64	1.36	2.05	0.20
Lowboy Truck/Trailer	3	Paved	0	300	0.003	0.001	0.00	0.00	0.00	0.00
Fuel, Helicopter Support Truck	2	Unpaved	17	240	2.273	0.227	77.28	7.73	9.27	0.93
Fuel, Helicopter Support Truck	2	Paved	10	240	0.003	0.001	0.07	0.02	0.01	0.00
Worker Commute	165	Paved	58	300	0.003	0.001	31.87	7.82	4.78	1.17
<b>Offsite Total</b>							<b>758.01</b>	<b>80.54</b>	<b>104.78</b>	<b>11.19</b>
<b>Total</b>							<b>758.01</b>	<b>80.54</b>	<b>104.78</b>	<b>11.19</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**



**Table 65**  
**Transmission and Subtransmission Construction Emissions**  
**Install/Transfer Conductor**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 66**  
**Transmission and Subtransmission Construction Emissions**  
**Shoo-fly Pole Removal**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	4.51	18.17	41.94	0.07	1.60	1.47	7,403.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>4.51</b>	<b>18.17</b>	<b>41.94</b>	<b>0.07</b>	<b>1.60</b>	<b>1.47</b>	<b>7403.0</b>
Offsite Motor Vehicle Exhaust	0.16	2.38	3.83	0.01	0.16	0.07	1,059.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	355.18	35.74	
<b>Offsite Total</b>	<b>0.16</b>	<b>2.38</b>	<b>3.83</b>	<b>0.01</b>	<b>355.34</b>	<b>35.80</b>	<b>1059.1</b>
<b>Total</b>	<b>4.66</b>	<b>20.56</b>	<b>45.77</b>	<b>0.08</b>	<b>356.95</b>	<b>37.28</b>	<b>8462.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.05	0.10	0.00	0.00	0.00	18.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.10</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>18.5</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.89	0.09	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.89</b>	<b>0.09</b>	<b>2.6</b>
<b>Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.11</b>	<b>0.00</b>	<b>0.89</b>	<b>0.09</b>	<b>21.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	60	2	5	6
Manlift/Bucket Truck	250	2	5	10
Boom/Crane Truck	350	2	5	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	60	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Manlift/Bucket Truck	250	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	0.76	3.78	4.81	0.01	0.40	0.37	562.90	0.07	0.01	568.9
Manlift/Bucket Truck	1.90	8.19	22.14	0.04	0.66	0.61	4253.30	0.17	0.11	4,291.1

**Table 66**  
**Transmission and Subtransmission Construction Emissions**  
**Shoo-fly Pole Removal**

Boom/Crane Truck	1.85	6.20	14.99	0.02	0.54	0.50	2519.15	0.17	0.07	2,543.0
<b>Total</b>	<b>4.51</b>	<b>18.17</b>	<b>41.94</b>	<b>0.07</b>	<b>1.60</b>	<b>1.47</b>	<b>7335.35</b>	<b>0.41</b>	<b>0.19</b>	<b>7402.95</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.00	0.01	0.01	0.00	0.00	0.00	1.41	0.00	0.00	1.4
Manlift/Bucket Truck	0.00	0.02	0.06	0.00	0.00	0.00	10.63	0.00	0.00	10.7
Boom/Crane Truck	0.00	0.02	0.04	0.00	0.00	0.00	6.30	0.00	0.00	6.4
<b>Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.10</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>18.34</b>	<b>0.00</b>	<b>0.00</b>	<b>18.51</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	5	N/A	27
Water Truck	2	5	N/A	27
Manlift/Bucket Truck	2	5	N/A	27
Boom/Crane Truck	2	5	N/A	27
Flat Bed Truck/Trailer	2	5	N/A	27
Worker Commute	6	5	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										

**Table 66**  
**Transmission and Subtransmission Construction Emissions**  
**Shoo-fly Pole Removal**

None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Manlift/Bucket Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Boom/Crane Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Flat Bed Truck/Trailer	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.16</b>	<b>2.38</b>	<b>3.83</b>	<b>0.01</b>	<b>0.16</b>	<b>0.07</b>	<b>1047.71</b>	<b>0.02</b>	<b>0.04</b>	<b>1059.13</b>
<b>Total</b>	<b>0.16</b>	<b>2.38</b>	<b>3.83</b>	<b>0.01</b>	<b>0.16</b>	<b>0.07</b>	<b>1047.71</b>	<b>0.02</b>	<b>0.04</b>	<b>1059.13</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.10
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Manlift/Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Flat Bed Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.62</b>	<b>0.00</b>	<b>0.00</b>	<b>2.65</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.62</b>	<b>0.00</b>	<b>0.00</b>	<b>2.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	2	Unpaved	17	5	1.311	0.131	44.56	4.46	0.11	0.01
1-Ton Truck, 4x4	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	2	Unpaved	17	5	2.273	0.227	77.28	7.73	0.19	0.02
Water Truck	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Manlift/Bucket Truck	2	Unpaved	17	5	2.273	0.227	77.28	7.73	0.19	0.02
Manlift/Bucket Truck	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00

**Table 66**  
**Transmission and Subtransmission Construction Emissions**  
**Shoo-fly Pole Removal**

Boom/Crane Truck	2	Unpaved	17	5	2.273	0.227	77.28	7.73	0.19	0.02
Boom/Crane Truck	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Flat Bed Truck/Trailer	2	Unpaved	17	5	2.273	0.227	77.28	7.73	0.19	0.02
Flat Bed Truck/Trailer	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	6	Paved	58	5	0.003	0.001	1.16	0.28	0.00	0.00
<b>Offsite Total</b>							<b>355.18</b>	<b>35.74</b>	<b>0.89</b>	<b>0.09</b>
<b>Total</b>							<b>355.18</b>	<b>35.74</b>	<b>0.89</b>	<b>0.09</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 67**

**Transmission and Subtransmission Construction Emissions  
Remove Shoo-fly Conductor & GW**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	10.82	43.16	108.64	0.21	3.45	3.17	21,631.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>10.82</b>	<b>43.16</b>	<b>108.64</b>	<b>0.21</b>	<b>3.45</b>	<b>3.17</b>	<b>21631.8</b>
Offsite Motor Vehicle Exhaust	0.57	10.08	11.86	0.04	0.55	0.21	3,627.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1112.10	112.15	
<b>Offsite Total</b>	<b>0.57</b>	<b>10.08</b>	<b>11.86</b>	<b>0.04</b>	<b>1112.65</b>	<b>112.36</b>	<b>3627.2</b>
<b>Total</b>	<b>11.40</b>	<b>53.24</b>	<b>120.50</b>	<b>0.25</b>	<b>1116.10</b>	<b>115.53</b>	<b>25259.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.05	0.20	0.51	0.00	0.02	0.01	100.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.05</b>	<b>0.20</b>	<b>0.51</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>100.5</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.06	0.00	0.00	0.00	17.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	5.37	0.54	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.06</b>	<b>0.00</b>	<b>5.37</b>	<b>0.54</b>	<b>17.7</b>
<b>Total</b>	<b>0.05</b>	<b>0.25</b>	<b>0.57</b>	<b>0.00</b>	<b>5.39</b>	<b>0.56</b>	<b>118.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Manlift/Bucket Truck	250	6	10	10
Boom/Crane Truck	350	4	10	5
Bull Wheel Puller	500	2	7	5
Hydraulic Rewind Puller	300	2	7	5

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Manlift/Bucket Truck	250	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Bull Wheel Puller	500	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Hydraulic Rewind Puller	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	---------------------------	--------------------------	---------------------------	---------------------------	----------------------------	-----------------------------	---------------------------	---------------------------	---------------------------	----------------------------

**Table 67**  
**Transmission and Subtransmission Construction Emissions**  
**Remove Shoo-fly Conductor & GW**

Manlift/Bucket Truck	5.69	24.58	66.42	0.13	1.97	1.82	12759.90	0.51	0.33	12,873.3
Boom/Crane Truck	2.65	8.86	21.42	0.04	0.77	0.71	3598.79	0.24	0.09	3,632.8
Bull Wheel Puller	1.24	4.86	10.40	0.02	0.35	0.32	2540.10	0.11	0.07	2,562.9
Hydraulic Rewind Puller	1.24	4.86	10.40	0.02	0.35	0.32	2540.10	0.11	0.07	2,562.9
<b>Total</b>	<b>10.82</b>	<b>43.16</b>	<b>108.64</b>	<b>0.21</b>	<b>3.45</b>	<b>3.17</b>	<b>21438.89</b>	<b>0.98</b>	<b>0.56</b>	<b>21631.82</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Manlift/Bucket Truck	0.03	0.12	0.33	0.00	0.01	0.01	63.80	0.00	0.00	64.4
Boom/Crane Truck	0.01	0.04	0.11	0.00	0.00	0.00	17.99	0.00	0.00	18.2
Bull Wheel Puller	0.00	0.02	0.04	0.00	0.00	0.00	8.89	0.00	0.00	9.0
Hydraulic Rewind Puller	0.00	0.02	0.04	0.00	0.00	0.00	8.89	0.00	0.00	9.0
<b>Total</b>	<b>0.05</b>	<b>0.20</b>	<b>0.51</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>99.57</b>	<b>0.00</b>	<b>0.00</b>	<b>100.47</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	8	10	N/A	27
Manlift/Bucket Truck	6	10	N/A	27
Sleeving Truck	4	10	N/A	27
Boom/Crane Truck	4	10	N/A	27
Truck, Semi Tractor	2	5	N/A	27
Water Truck	2	10	N/A	27
Lowboy Truck/Trailer	6	10	N/A	27
Worker Commute	28	10	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Sleeving Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Truck, Semi Tractor	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 67**  
**Transmission and Subtransmission Construction Emissions**  
**Remove Shoo-fly Conductor & GW**

Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.01	0.08	0.24	0.00	0.03	0.01	161.75	0.00	0.01	163.67
Manlift/Bucket Truck	0.07	0.46	2.68	0.01	0.09	0.05	573.52	0.00	0.02	579.65
Sleeving Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Boom/Crane Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Truck, Semi Tractor	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Lowboy Truck/Trailer	0.07	0.46	2.68	0.01	0.09	0.05	573.52	0.00	0.02	579.65
Worker Commute	0.28	8.16	0.89	0.01	0.17	0.01	1132.02	0.07	0.04	1144.94
<b>Offsite Total</b>	<b>0.57</b>	<b>10.08</b>	<b>11.86</b>	<b>0.04</b>	<b>0.55</b>	<b>0.21</b>	<b>3587.86</b>	<b>0.08</b>	<b>0.12</b>	<b>3627.21</b>
<b>Total</b>	<b>0.57</b>	<b>10.08</b>	<b>11.86</b>	<b>0.04</b>	<b>0.55</b>	<b>0.21</b>	<b>3587.86</b>	<b>0.08</b>	<b>0.12</b>	<b>3627.21</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.82
Manlift/Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.87	0.00	0.00	2.90
Sleeving Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.91	0.00	0.00	1.93
Boom/Crane Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.91	0.00	0.00	1.93
Truck, Semi Tractor	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.97
Lowboy Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	2.87	0.00	0.00	2.90
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.46</b>	<b>0.00</b>	<b>0.00</b>	<b>17.65</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.46</b>	<b>0.00</b>	<b>0.00</b>	<b>17.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**



**Table 67**  
**Transmission and Subtransmission Construction Emissions**  
**Remove Shoo-fly Conductor & GW**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	8	Unpaved	17	10	1.311	0.131	178.23	17.82	0.89	0.09
1-Ton Truck, 4x4	8	Paved	10	10	0.003	0.001	0.27	0.07	0.00	0.00
Manlift/Bucket Truck	6	Unpaved	17	10	2.273	0.227	231.85	23.18	1.16	0.12
Manlift/Bucket Truck	6	Paved	10	10	0.003	0.001	0.20	0.05	0.00	0.00
Sleeving Truck	4	Unpaved	17	10	2.273	0.227	154.57	15.46	0.77	0.08
Sleeving Truck	4	Paved	10	10	0.003	0.001	0.13	0.03	0.00	0.00
Boom/Crane Truck	4	Unpaved	17	10	2.273	0.227	154.57	15.46	0.77	0.08
Boom/Crane Truck	4	Paved	10	10	0.003	0.001	0.13	0.03	0.00	0.00
Truck, Semi Tractor	2	Unpaved	17	5	2.273	0.227	77.28	7.73	0.19	0.02
Truck, Semi Tractor	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	2	Unpaved	17	10	2.273	0.227	77.28	7.73	0.39	0.04
Water Truck	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Lowboy Truck/Trailer	6	Unpaved	17	10	2.273	0.227	231.85	23.18	1.16	0.12
Lowboy Truck/Trailer	6	Paved	10	10	0.003	0.001	0.20	0.05	0.00	0.00
Worker Commute	28	Paved	58	10	0.003	0.001	5.41	1.33	0.03	0.01
<b>Offsite Total</b>							<b>1112.10</b>	<b>112.15</b>	<b>5.37</b>	<b>0.54</b>
<b>Total</b>							<b>1112.10</b>	<b>112.15</b>	<b>5.37</b>	<b>0.54</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 68**  
**Transmission and Subtransmission Construction Emissions**  
**Guard Structure Removal**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	10.72	43.55	87.42	0.14	4.09	3.76	14,211.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>10.72</b>	<b>43.55</b>	<b>87.42</b>	<b>0.14</b>	<b>4.09</b>	<b>3.76</b>	<b>14211.6</b>
Offsite Motor Vehicle Exhaust	0.52	12.23	5.85	0.03	0.36	0.09	2,605.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1029.38	103.78	
<b>Offsite Total</b>	<b>0.52</b>	<b>12.23</b>	<b>5.85</b>	<b>0.03</b>	<b>1029.74</b>	<b>103.87</b>	<b>2605.5</b>
<b>Total</b>	<b>11.24</b>	<b>55.78</b>	<b>93.27</b>	<b>0.17</b>	<b>1033.82</b>	<b>107.63</b>	<b>16817.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.27	1.09	2.19	0.00	0.10	0.09	355.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.27</b>	<b>1.09</b>	<b>2.19</b>	<b>0.00</b>	<b>0.10</b>	<b>0.09</b>	<b>355.3</b>
Offsite Motor Vehicle Exhaust	0.01	0.31	0.15	0.00	0.01	0.00	65.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	25.73	2.59	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.31</b>	<b>0.15</b>	<b>0.00</b>	<b>25.74</b>	<b>2.60</b>	<b>65.1</b>
<b>Total</b>	<b>0.28</b>	<b>1.39</b>	<b>2.33</b>	<b>0.00</b>	<b>25.85</b>	<b>2.69</b>	<b>420.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	8	50	7
Manlift/Bucket Truck	350	4	50	5
Boom/Crane Truck	500	4	50	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	500	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	3.53	17.64	22.44	0.03	1.88	1.73	2626.85	0.32	0.07	2,654.9
Manlift/Bucket Truck	1.90	8.19	22.14	0.04	0.66	0.61	4253.30	0.17	0.11	4,291.1

**Table 68**  
**Transmission and Subtransmission Construction Emissions**  
**Guard Structure Removal**

Boom/Crane Truck	5.29	17.71	42.84	0.07	1.55	1.42	7197.58	0.48	0.19	7,265.6
<b>Total</b>	<b>10.72</b>	<b>43.55</b>	<b>87.42</b>	<b>0.14</b>	<b>4.09</b>	<b>3.76</b>	<b>14077.73</b>	<b>0.97</b>	<b>0.37</b>	<b>14211.58</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.09	0.44	0.56	0.00	0.05	0.04	65.67	0.01	0.00	66.4
Manlift/Bucket Truck	0.05	0.20	0.55	0.00	0.02	0.02	106.33	0.00	0.00	107.3
Boom/Crane Truck	0.13	0.44	1.07	0.00	0.04	0.04	179.94	0.01	0.00	181.6
<b>Total</b>	<b>0.27</b>	<b>1.09</b>	<b>2.19</b>	<b>0.00</b>	<b>0.10</b>	<b>0.09</b>	<b>351.94</b>	<b>0.02</b>	<b>0.01</b>	<b>355.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	8	50	N/A	27
1-Ton Truck, 4x4	8	50	N/A	27
Water Truck	2	50	N/A	27
Manlift/Bucket Truck	4	50	N/A	27
Boom/Crane Truck	4	50	N/A	27
Extendable Flat Bed Pole Truck	8	50	N/A	27
Worker Commute	24	50	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
---------	---------------------------	--------------------------	---------------------------	---------------------------	----------------------------	-----------------------------	---------------------------	---------------------------	---------------------------	----------------------------

**Table 68**  
**Transmission and Subtransmission Construction Emissions**  
**Guard Structure Removal**

<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88
1-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Manlift/Bucket Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Boom/Crane Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Extendable Flat Bed Pole Truck	0.04	1.09	0.12	0.00	0.02	0.00	150.56	0.01	0.00	152.28
Worker Commute	0.24	6.99	0.76	0.01	0.14	0.01	970.30	0.06	0.03	981.38
<b>Offsite Total</b>	<b>0.52</b>	<b>12.23</b>	<b>5.85</b>	<b>0.03</b>	<b>0.36</b>	<b>0.09</b>	<b>2575.48</b>	<b>0.10</b>	<b>0.09</b>	<b>2605.50</b>
<b>Total</b>	<b>0.52</b>	<b>12.23</b>	<b>5.85</b>	<b>0.03</b>	<b>0.36</b>	<b>0.09</b>	<b>2575.48</b>	<b>0.10</b>	<b>0.09</b>	<b>2605.50</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	6.23	0.00	0.00	6.32
1-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	6.23	0.00	0.00	6.32
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.78	0.00	0.00	4.83
Manlift/Bucket Truck	0.00	0.01	0.04	0.00	0.00	0.00	9.56	0.00	0.00	9.66
Boom/Crane Truck	0.00	0.01	0.04	0.00	0.00	0.00	9.56	0.00	0.00	9.66
Extendable Flat Bed Pole Truck	0.00	0.03	0.00	0.00	0.00	0.00	3.76	0.00	0.00	3.81
Worker Commute	0.01	0.17	0.02	0.00	0.00	0.00	24.26	0.00	0.00	24.53
<b>Offsite Total</b>	<b>0.01</b>	<b>0.31</b>	<b>0.15</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>64.39</b>	<b>0.00</b>	<b>0.00</b>	<b>65.14</b>
<b>Total</b>	<b>0.01</b>	<b>0.31</b>	<b>0.15</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>64.39</b>	<b>0.00</b>	<b>0.00</b>	<b>65.14</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	8	Unpaved	17	50	1.102	0.110	149.83	14.98	3.75	0.37
3/4-Ton Truck, 4x4	8	Paved	10	50	0.003	0.001	0.27	0.07	0.01	0.00
1-Ton Truck, 4x4	8	Unpaved	17	50	1.311	0.131	178.23	17.82	4.46	0.45

**Table 68**  
**Transmission and Subtransmission Construction Emissions**  
**Guard Structure Removal**

1-Ton Truck, 4x4	8	Paved	10	50	0.003	0.001	0.27	0.07	0.01	0.00
Water Truck	2	Unpaved	17	50	2.273	0.227	77.28	7.73	1.93	0.19
Water Truck	2	Paved	10	50	0.003	0.001	0.07	0.02	0.00	0.00
Manlift/Bucket Truck	4	Unpaved	17	50	2.273	0.227	154.57	15.46	3.86	0.39
Manlift/Bucket Truck	4	Paved	10	50	0.003	0.001	0.13	0.03	0.00	0.00
Boom/Crane Truck	4	Unpaved	17	50	2.273	0.227	154.57	15.46	3.86	0.39
Boom/Crane Truck	4	Paved	10	50	0.003	0.001	0.13	0.03	0.00	0.00
Extendable Flat Bed Pole Truck	8	Unpaved	17	50	2.273	0.227	309.13	30.91	7.73	0.77
Extendable Flat Bed Pole Truck	8	Paved	10	50	0.003	0.001	0.27	0.07	0.01	0.00
Worker Commute	24	Paved	58	50	0.003	0.001	4.63	1.14	0.12	0.03
<b>Offsite Total</b>							<b>1029.38</b>	<b>103.78</b>	<b>25.73</b>	<b>2.59</b>
<b>Total</b>							<b>1029.38</b>	<b>103.78</b>	<b>25.73</b>	<b>2.59</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 69**  
**Transmission and Subtransmission Construction Emissions**  
**115 kV Pole Removal**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.13	8.39	19.43	0.03	0.74	0.68	3,406.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.13</b>	<b>8.39</b>	<b>19.43</b>	<b>0.03</b>	<b>0.74</b>	<b>0.68</b>	<b>3406.6</b>
Offsite Motor Vehicle Exhaust	0.09	2.06	1.16	0.01	0.08	0.02	498.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	161.81	16.37	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.06</b>	<b>1.16</b>	<b>0.01</b>	<b>161.88</b>	<b>16.39</b>	<b>498.5</b>
<b>Total</b>	<b>2.22</b>	<b>10.45</b>	<b>20.59</b>	<b>0.04</b>	<b>162.62</b>	<b>17.08</b>	<b>3905.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.08	0.17	0.00	0.01	0.01	30.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.08</b>	<b>0.17</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>30.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	4.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.46	0.15	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>1.46</b>	<b>0.15</b>	<b>4.5</b>
<b>Total</b>	<b>0.02</b>	<b>0.09</b>	<b>0.19</b>	<b>0.00</b>	<b>1.46</b>	<b>0.15</b>	<b>35.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	1	18	5
Manlift/Bucket Truck	250	1	18	8
Boom/Crane Truck	350	1	18	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Manlift/Bucket Truck	250	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	0.31	1.58	2.00	0.00	0.17	0.15	234.54	0.03	0.01	237.0
Manlift/Bucket Truck	0.76	3.28	8.86	0.02	0.26	0.24	1701.32	0.07	0.04	1,716.4

**Table 69**  
**Transmission and Subtransmission Construction Emissions**  
**115 kV Pole Removal**

Boom/Crane Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
<b>Total</b>	<b>2.13</b>	<b>8.39</b>	<b>19.43</b>	<b>0.03</b>	<b>0.74</b>	<b>0.68</b>	<b>3375.38</b>	<b>0.19</b>	<b>0.09</b>	<b>3406.60</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.00	0.01	0.02	0.00	0.00	0.00	2.11	0.00	0.00	2.1
Manlift/Bucket Truck	0.01	0.03	0.08	0.00	0.00	0.00	15.31	0.00	0.00	15.4
Boom/Crane Truck	0.01	0.03	0.08	0.00	0.00	0.00	12.96	0.00	0.00	13.1
<b>Total</b>	<b>0.02</b>	<b>0.08</b>	<b>0.17</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>30.38</b>	<b>0.00</b>	<b>0.00</b>	<b>30.66</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	18	N/A	27
Manlift/Bucket Truck	1	18	N/A	27
Boom/Crane Truck	1	18	N/A	27
Flat Bed Pole Truck	1	18	N/A	27
Worker Commute	6	18	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 69  
Transmission and Subtransmission Construction Emissions  
115 kV Pole Removal**

1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92
Manlift/Bucket Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Boom/Crane Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Pole Truck	0.00	0.14	0.01	0.00	0.00	0.00	18.82	0.00	0.00	19.04
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.09</b>	<b>2.06</b>	<b>1.16</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>493.01</b>	<b>0.02</b>	<b>0.02</b>	<b>498.51</b>
<b>Total</b>	<b>0.09</b>	<b>2.06</b>	<b>1.16</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>493.01</b>	<b>0.02</b>	<b>0.02</b>	<b>498.51</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.37
Manlift/Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.87
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.87
Flat Bed Pole Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.17
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.18	0.00	0.00	2.21
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.44</b>	<b>0.00</b>	<b>0.00</b>	<b>4.49</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.44</b>	<b>0.00</b>	<b>0.00</b>	<b>4.49</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	2	Unpaved	17	18	1.311	0.131	44.56	4.46	0.40	0.04
1-Ton Truck, 4x4	2	Paved	10	18	0.003	0.001	0.07	0.02	0.00	0.00
Manlift/Bucket Truck	1	Unpaved	17	18	2.273	0.227	38.64	3.86	0.35	0.03
Manlift/Bucket Truck	1	Paved	10	18	0.003	0.001	0.03	0.01	0.00	0.00
Boom/Crane Truck	1	Unpaved	17	18	2.273	0.227	38.64	3.86	0.35	0.03
Boom/Crane Truck	1	Paved	10	18	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Pole Truck	1	Unpaved	17	18	2.273	0.227	38.64	3.86	0.35	0.03
Flat Bed Pole Truck	1	Paved	10	18	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	6	Paved	58	18	0.003	0.001	1.16	0.28	0.01	0.00
<b>Offsite Total</b>							<b>161.81</b>	<b>16.37</b>	<b>1.46</b>	<b>0.15</b>
<b>Total</b>							<b>161.81</b>	<b>16.37</b>	<b>1.46</b>	<b>0.15</b>



**Table 69**  
**Transmission and Subtransmission Construction Emissions**  
**115 kV Pole Removal**

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 70**  
**Transmission and Subtransmission Construction Emissions**  
**Install TSP Riser Foundations**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.98	12.14	21.65	0.06	0.72	0.66	6,140.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	9.84	1.49	
<b>Onsite Total</b>	<b>2.98</b>	<b>12.14</b>	<b>21.65</b>	<b>0.06</b>	<b>10.55</b>	<b>2.15</b>	<b>6140.3</b>
Offsite Motor Vehicle Exhaust	0.58	7.08	17.62	0.04	0.64	0.31	4,288.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	833.75	84.06	
<b>Offsite Total</b>	<b>0.58</b>	<b>7.08</b>	<b>17.62</b>	<b>0.04</b>	<b>834.39</b>	<b>84.38</b>	<b>4288.8</b>
<b>Total</b>	<b>3.57</b>	<b>19.21</b>	<b>39.26</b>	<b>0.11</b>	<b>844.95</b>	<b>86.53</b>	<b>10429.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.07	0.26	0.49	0.00	0.02	0.02	130.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.06	0.01	
<b>Onsite Total</b>	<b>0.07</b>	<b>0.26</b>	<b>0.49</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>130.0</b>
Offsite Motor Vehicle Exhaust	0.01	0.16	0.33	0.00	0.01	0.01	82.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	16.19	1.63	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.33</b>	<b>0.00</b>	<b>16.20</b>	<b>1.64</b>	<b>82.3</b>
<b>Total</b>	<b>0.08</b>	<b>0.42</b>	<b>0.82</b>	<b>0.00</b>	<b>16.28</b>	<b>1.66</b>	<b>212.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	1	50	7
Backhoe/Front Loader	200	1	50	10
Auger Truck	500	1	35	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes
Auger Truck	500	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	0.93	3.10	7.50	0.01	0.27	0.25	1259.58	0.08	0.03	1,271.5

**Table 70**  
**Transmission and Subtransmission Construction Emissions**  
**Install TSP Riser Foundations**

Backhoe/Front Loader	1.02	3.53	7.90	0.02	0.26	0.24	1715.83	0.09	0.04	1,731.6
Auger Truck	1.03	5.51	6.25	0.03	0.19	0.17	3110.29	0.09	0.08	3,137.2
<b>Total</b>	<b>2.98</b>	<b>12.14</b>	<b>21.65</b>	<b>0.06</b>	<b>0.72</b>	<b>0.66</b>	<b>6085.70</b>	<b>0.27</b>	<b>0.16</b>	<b>6140.29</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.02	0.08	0.19	0.00	0.01	0.01	31.49	0.00	0.00	31.8
Backhoe/Front Loader	0.03	0.09	0.20	0.00	0.01	0.01	42.90	0.00	0.00	43.3
Auger Truck	0.02	0.10	0.11	0.00	0.00	0.00	54.43	0.00	0.00	54.9
<b>Total</b>	<b>0.07</b>	<b>0.26</b>	<b>0.49</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>128.82</b>	<b>0.01</b>	<b>0.00</b>	<b>129.98</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	3	50	N/A	27
Boom/Crane Truck	1	50	N/A	27
Auger Truck	1	35	N/A	27
Water Truck	1	50	N/A	27
Dump Truck	2	50	N/A	27
Concrete Mixer Truck	15	35	N/A	60
Worker Commute	12	50	N/A	58

<sup>a</sup> Concrete mixer trucks based 1 TSP/day, on 148 CY/TSP and 10 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Table 70**  
**Transmission and Subtransmission Construction Emissions**  
**Install TSP Riser Foundations**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.64	0.09	0.00	0.01	0.00	93.51	0.01	0.00	94.83
Boom/Crane Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Auger Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Dump Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Concrete Mixer Truck	0.38	2.56	14.91	0.03	0.49	0.27	3186.23	0.02	0.11	3220.27
Worker Commute	0.12	3.50	0.38	0.01	0.07	0.00	485.15	0.03	0.02	490.69
<b>Offsite Total</b>	<b>0.58</b>	<b>7.08</b>	<b>17.62</b>	<b>0.04</b>	<b>0.64</b>	<b>0.31</b>	<b>4242.83</b>	<b>0.06</b>	<b>0.14</b>	<b>4288.83</b>
<b>Total</b>	<b>0.58</b>	<b>7.08</b>	<b>17.62</b>	<b>0.04</b>	<b>0.64</b>	<b>0.31</b>	<b>4242.83</b>	<b>0.06</b>	<b>0.14</b>	<b>4288.83</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	2.34	0.00	0.00	2.37
Boom/Crane Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.39	0.00	0.00	2.42
Auger Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.67	0.00	0.00	1.69
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.39	0.00	0.00	2.42
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.78	0.00	0.00	4.83
Concrete Mixer Truck	0.01	0.04	0.26	0.00	0.01	0.00	55.76	0.00	0.00	56.35
Worker Commute	0.00	0.09	0.01	0.00	0.00	0.00	12.13	0.00	0.00	12.27
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.33</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>81.46</b>	<b>0.00</b>	<b>0.00</b>	<b>82.34</b>
<b>Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.33</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>81.46</b>	<b>0.00</b>	<b>0.00</b>	<b>82.34</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00

**Table 70**  
**Transmission and Subtransmission Construction Emissions**  
**Install TSP Riser Foundations**

<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	3	Unpaved	17	50	1.102	0.110	56.19	5.62	1.40	0.14
3/4-Ton Truck, 4x4	3	Paved	10	50	0.003	0.001	0.10	0.02	0.00	0.00
Boom/Crane Truck	1	Unpaved	17	50	2.273	0.227	38.64	3.86	0.97	0.10
Boom/Crane Truck	1	Paved	10	50	0.003	0.001	0.03	0.01	0.00	0.00
Auger Truck	1	Unpaved	17	35	2.273	0.227	38.64	3.86	0.68	0.07
Auger Truck	1	Paved	10	35	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	17	50	2.273	0.227	38.64	3.86	0.97	0.10
Water Truck	1	Paved	10	50	0.003	0.001	0.03	0.01	0.00	0.00
Dump Truck	2	Unpaved	17	50	2.273	0.227	77.28	7.73	1.93	0.19
Dump Truck	2	Paved	10	50	0.003	0.001	0.07	0.02	0.00	0.00
Concrete Mixer Truck	15	Unpaved	17	35	2.273	0.227	579.62	57.96	10.14	1.01
Concrete Mixer Truck	15	Paved	43	35	0.003	0.001	2.15	0.53	0.04	0.01
Worker Commute	12	Paved	58	50	0.003	0.001	2.32	0.57	0.06	0.01
<b>Offsite Total</b>							<b>833.75</b>	<b>84.06</b>	<b>16.19</b>	<b>1.63</b>
<b>Total</b>							<b>833.75</b>	<b>84.06</b>	<b>16.19</b>	<b>1.63</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling <sup>d</sup>	CY	148	1770	6.65E-02	1.01E-02	9.84	1.49	0.06	0.01
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>9.84</b>	<b>1.49</b>	<b>0.06</b>	<b>0.01</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Daily based on 1 TSP, 13 ft. diameter x 30 ft. deep; total based on 12 TSPs

**Table 71**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Riser Haul**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.06	3.54	8.57	0.01	0.31	0.28	1,453.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.06</b>	<b>3.54</b>	<b>8.57</b>	<b>0.01</b>	<b>0.31</b>	<b>0.28</b>	<b>1453.1</b>
Offsite Motor Vehicle Exhaust	0.10	1.90	1.98	0.01	0.09	0.03	613.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	193.00	19.44	
<b>Offsite Total</b>	<b>0.10</b>	<b>1.90</b>	<b>1.98</b>	<b>0.01</b>	<b>193.09</b>	<b>19.47</b>	<b>613.2</b>
<b>Total</b>	<b>1.16</b>	<b>5.44</b>	<b>10.55</b>	<b>0.02</b>	<b>193.39</b>	<b>19.76</b>	<b>2066.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	5.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.8</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.08	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.77</b>	<b>0.08</b>	<b>2.5</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.77</b>	<b>0.08</b>	<b>8.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	1	8	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
<b>Total</b>	<b>1.06</b>	<b>3.54</b>	<b>8.57</b>	<b>0.01</b>	<b>0.31</b>	<b>0.28</b>	<b>1439.52</b>	<b>0.10</b>	<b>0.04</b>	<b>1453.12</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 71**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Riser Haul**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.00	0.01	0.03	0.00	0.00	0.00	5.76	0.00	0.00	5.8
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.76</b>	<b>0.00</b>	<b>0.00</b>	<b>5.81</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	2	8	N/A	27
Water Truck	1	8	N/A	27
Boom/Crane Truck	1	8	N/A	27
Flat Bed Pole Truck	2	8	N/A	27
Worker Commute	4	8	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Pole Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.42	0.06	0.00	0.01	0.00	62.34	0.00	0.00	63.22
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Boom/Crane Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Pole Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 71**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Riser Haul**

<b>Offsite Total</b>	<b>0.10</b>	<b>1.90</b>	<b>1.98</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>606.41</b>	<b>0.02</b>	<b>0.02</b>	<b>613.21</b>
<b>Total</b>	<b>0.10</b>	<b>1.90</b>	<b>1.98</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>606.41</b>	<b>0.02</b>	<b>0.02</b>	<b>613.21</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.39
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.39
Flat Bed Pole Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.77
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.65
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.43</b>	<b>0.00</b>	<b>0.00</b>	<b>2.45</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.43</b>	<b>0.00</b>	<b>0.00</b>	<b>2.45</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	2	Unpaved	17	8	1.102	0.110	37.46	3.75	0.15	0.01
3/4-Ton Truck, 4x4	2	Paved	10	8	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	1	Unpaved	17	8	2.273	0.227	38.64	3.86	0.15	0.02
Water Truck	1	Paved	10	8	0.003	0.001	0.03	0.01	0.00	0.00
Boom/Crane Truck	1	Unpaved	17	8	2.273	0.227	38.64	3.86	0.15	0.02
Boom/Crane Truck	1	Paved	10	8	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Pole Truck	2	Unpaved	17	8	2.273	0.227	77.28	7.73	0.31	0.03
Flat Bed Pole Truck	2	Paved	10	8	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	8	0.003	0.001	0.77	0.19	0.00	0.00
<b>Offsite Total</b>							<b>193.00</b>	<b>19.44</b>	<b>0.77</b>	<b>0.08</b>
<b>Total</b>							<b>193.00</b>	<b>19.44</b>	<b>0.77</b>	<b>0.08</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]



**Table 71**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Riser Haul**

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 72  
Transmission and Subtransmission Construction Emissions  
TSP Riser Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.91	14.97	29.71	0.05	1.42	1.30	4,667.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4667.8</b>
Offsite Motor Vehicle Exhaust	0.29	6.88	2.73	0.02	0.21	0.05	1,434.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	404.62	41.05	
<b>Offsite Total</b>	<b>0.29</b>	<b>6.88</b>	<b>2.73</b>	<b>0.02</b>	<b>404.83</b>	<b>41.09</b>	<b>1434.9</b>
<b>Total</b>	<b>4.20</b>	<b>21.85</b>	<b>32.43</b>	<b>0.06</b>	<b>406.25</b>	<b>42.39</b>	<b>6102.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.05	0.19	0.37	0.00	0.02	0.02	58.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.05</b>	<b>0.19</b>	<b>0.37</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>58.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.09	0.03	0.00	0.00	0.00	17.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	5.06	0.51	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.03</b>	<b>0.00</b>	<b>5.06</b>	<b>0.51</b>	<b>17.9</b>
<b>Total</b>	<b>0.05</b>	<b>0.27</b>	<b>0.41</b>	<b>0.00</b>	<b>5.08</b>	<b>0.53</b>	<b>76.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	3	25	6
Boom/Crane Truck	350	3	25	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 72**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Riser Assembly**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.13	5.67	7.21	0.01	0.60	0.56	844.35	0.10	0.02	853.4
Boom/Crane Truck	2.78	9.30	22.49	0.04	0.81	0.75	3778.73	0.25	0.10	3,814.4
<b>Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4623.08</b>	<b>0.35</b>	<b>0.12</b>	<b>4667.80</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.01	0.07	0.09	0.00	0.01	0.01	10.55	0.00	0.00	10.7
Boom/Crane Truck	0.03	0.12	0.28	0.00	0.01	0.01	47.23	0.00	0.00	47.7
<b>Total</b>	<b>0.05</b>	<b>0.19</b>	<b>0.37</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>57.79</b>	<b>0.00</b>	<b>0.00</b>	<b>58.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	25	N/A	27
1-Ton Truck, 4x4	6	25	N/A	27
Water Truck	1	25	N/A	27
Boom/Crane Truck	3	25	N/A	27
Worker Commute	18	25	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Table 72**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Riser Assembly**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.05	1.27	0.19	0.00	0.02	0.00	187.03	0.01	0.01	189.66
1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Boom/Crane Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.29</b>	<b>6.88</b>	<b>2.73</b>	<b>0.02</b>	<b>0.21</b>	<b>0.05</b>	<b>1418.42</b>	<b>0.06</b>	<b>0.05</b>	<b>1434.88</b>
<b>Total</b>	<b>0.29</b>	<b>6.88</b>	<b>2.73</b>	<b>0.02</b>	<b>0.21</b>	<b>0.05</b>	<b>1418.42</b>	<b>0.06</b>	<b>0.05</b>	<b>1434.88</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	2.34	0.00	0.00	2.37
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.52	0.00	0.00	1.53
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.19	0.00	0.00	1.21
Boom/Crane Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.58	0.00	0.00	3.62
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.10	0.00	0.00	9.20
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.73</b>	<b>0.00</b>	<b>0.00</b>	<b>17.94</b>
<b>Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.73</b>	<b>0.00</b>	<b>0.00</b>	<b>17.94</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00

**Table 72**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Riser Assembly**

<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	6	Unpaved	17	25	1.102	0.110	112.38	11.24	1.40	0.14
3/4-Ton Truck, 4x4	6	Paved	10	25	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Truck, 4x4	6	Unpaved	17	25	1.311	0.131	133.67	13.37	1.67	0.17
1-Ton Truck, 4x4	6	Paved	10	25	0.003	0.001	0.20	0.05	0.00	0.00
Water Truck	1	Unpaved	17	25	2.273	0.227	38.64	3.86	0.48	0.05
Water Truck	1	Paved	10	25	0.003	0.001	0.03	0.01	0.00	0.00
Boom/Crane Truck	3	Unpaved	17	25	2.273	0.227	115.92	11.59	1.45	0.14
Boom/Crane Truck	3	Paved	10	25	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	18	Paved	58	25	0.003	0.001	3.48	0.85	0.04	0.01
<b>Offsite Total</b>							<b>404.62</b>	<b>41.05</b>	<b>5.06</b>	<b>0.51</b>
<b>Total</b>							<b>404.62</b>	<b>41.05</b>	<b>5.06</b>	<b>0.51</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 73  
Transmission and Subtransmission Construction Emissions  
TSP Riser Erection**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.91	14.97	29.71	0.05	1.42	1.30	4,667.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4667.8</b>
Offsite Motor Vehicle Exhaust	0.25	6.65	1.39	0.01	0.16	0.02	1,145.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	288.60	29.43	
<b>Offsite Total</b>	<b>0.25</b>	<b>6.65</b>	<b>1.39</b>	<b>0.01</b>	<b>288.76</b>	<b>29.45</b>	<b>1145.1</b>
<b>Total</b>	<b>4.16</b>	<b>21.62</b>	<b>31.09</b>	<b>0.06</b>	<b>290.18</b>	<b>30.75</b>	<b>5812.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.05	0.19	0.37	0.00	0.02	0.02	58.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.05</b>	<b>0.19</b>	<b>0.37</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>58.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.02	0.00	0.00	0.00	14.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.61	0.37	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>0.00</b>	<b>3.61</b>	<b>0.37</b>	<b>14.3</b>
<b>Total</b>	<b>0.05</b>	<b>0.27</b>	<b>0.39</b>	<b>0.00</b>	<b>3.63</b>	<b>0.38</b>	<b>72.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	3	25	6
R/T Crane (L)	350	3	25	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
R/T Crane (L)	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 73**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Riser Erection**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.13	5.67	7.21	0.01	0.60	0.56	844.35	0.10	0.02	853.4
R/T Crane (L)	2.78	9.30	22.49	0.04	0.81	0.75	3778.73	0.25	0.10	3,814.4
<b>Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4623.08</b>	<b>0.35</b>	<b>0.12</b>	<b>4667.80</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.01	0.07	0.09	0.00	0.01	0.01	10.55	0.00	0.00	10.7
R/T Crane (L)	0.03	0.12	0.28	0.00	0.01	0.01	47.23	0.00	0.00	47.7
<b>Total</b>	<b>0.05</b>	<b>0.19</b>	<b>0.37</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>57.79</b>	<b>0.00</b>	<b>0.00</b>	<b>58.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	25	N/A	27
1-Ton Truck, 4x4	6	25	N/A	27
Water Truck	1	25	N/A	27
Worker Commute	18	25	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

**Table 73**  
**Transmission and Subtransmission Construction Emissions**  
**TSP Riser Erection**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.05	1.27	0.19	0.00	0.02	0.00	187.03	0.01	0.01	189.66
1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.25</b>	<b>6.65</b>	<b>1.39</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>1131.66</b>	<b>0.06</b>	<b>0.04</b>	<b>1145.05</b>
<b>Total</b>	<b>0.25</b>	<b>6.65</b>	<b>1.39</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>1131.66</b>	<b>0.06</b>	<b>0.04</b>	<b>1145.05</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	2.34	0.00	0.00	2.37
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.52	0.00	0.00	1.53
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.19	0.00	0.00	1.21
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.10	0.00	0.00	9.20
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.15</b>	<b>0.00</b>	<b>0.00</b>	<b>14.31</b>
<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.15</b>	<b>0.00</b>	<b>0.00</b>	<b>14.31</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	6	Unpaved	17	25	1.102	0.110	112.38	11.24	1.40	0.14
3/4-Ton Truck, 4x4	6	Paved	10	25	0.003	0.001	0.20	0.05	0.00	0.00



**Table 73  
Transmission and Subtransmission Construction Emissions  
TSP Riser Erection**

1-Ton Truck, 4x4	6	Unpaved	17	25	1.311	0.131	133.67	13.37	1.67	0.17
1-Ton Truck, 4x4	6	Paved	10	25	0.003	0.001	0.20	0.05	0.00	0.00
Water Truck	1	Unpaved	17	25	2.273	0.227	38.64	3.86	0.48	0.05
Water Truck	1	Paved	10	25	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	18	Paved	58	25	0.003	0.001	3.48	0.85	0.04	0.01
<b>Offsite Total</b>							<b>288.60</b>	<b>29.43</b>	<b>3.61</b>	<b>0.37</b>
<b>Total</b>							<b>288.60</b>	<b>29.43</b>	<b>3.61</b>	<b>0.37</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 74**  
**Transmission and Subtransmission Construction Emissions**  
**Vault Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.29	10.15	17.45	0.03	0.69	0.63	3,209.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	6.58	1.00	
<b>Onsite Total</b>	<b>2.29</b>	<b>10.15</b>	<b>17.45</b>	<b>0.03</b>	<b>7.27</b>	<b>1.63</b>	<b>3209.7</b>
Offsite Motor Vehicle Exhaust	0.24	3.40	6.43	0.02	0.26	0.12	1,688.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	433.25	43.66	
<b>Offsite Total</b>	<b>0.24</b>	<b>3.40</b>	<b>6.43</b>	<b>0.02</b>	<b>433.50</b>	<b>43.77</b>	<b>1688.4</b>
<b>Total</b>	<b>2.53</b>	<b>13.55</b>	<b>23.87</b>	<b>0.05</b>	<b>440.77</b>	<b>45.40</b>	<b>4898.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.03	0.17	0.26	0.00	0.01	0.01	48.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.05	0.01	
<b>Onsite Total</b>	<b>0.03</b>	<b>0.17</b>	<b>0.26</b>	<b>0.00</b>	<b>0.06</b>	<b>0.02</b>	<b>48.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.06	0.08	0.00	0.00	0.00	23.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	6.17	0.62	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.08</b>	<b>0.00</b>	<b>6.18</b>	<b>0.62</b>	<b>23.0</b>
<b>Total</b>	<b>0.04</b>	<b>0.23</b>	<b>0.34</b>	<b>0.00</b>	<b>6.23</b>	<b>0.64</b>	<b>71.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	125	1	42	8
Excavator	250	1	26	7
Crane (L)	500	1	26	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Excavator	250	0.105	0.339	0.785	0.002	0.026	0.024	158.540	0.009	0.004	Excavators
Crane (L)	500	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.63	4.68	4.45	0.01	0.23	0.22	810.37	0.06	0.02	818.1

**Table 74  
Transmission and Subtransmission Construction Emissions  
Vault Installation**

Excavator	0.74	2.37	5.50	0.01	0.18	0.17	1109.78	0.07	0.03	1,120.1
Crane (L)	0.93	3.10	7.50	0.01	0.27	0.25	1259.58	0.08	0.03	1,271.5
<b>Total</b>	<b>2.29</b>	<b>10.15</b>	<b>17.45</b>	<b>0.03</b>	<b>0.69</b>	<b>0.63</b>	<b>3179.73</b>	<b>0.21</b>	<b>0.08</b>	<b>3209.71</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.01	0.10	0.09	0.00	0.00	0.00	17.02	0.00	0.00	17.2
Excavator	0.01	0.03	0.07	0.00	0.00	0.00	14.43	0.00	0.00	14.6
Crane (L)	0.01	0.04	0.10	0.00	0.00	0.00	16.37	0.00	0.00	16.5
<b>Total</b>	<b>0.03</b>	<b>0.17</b>	<b>0.26</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>47.82</b>	<b>0.00</b>	<b>0.00</b>	<b>48.27</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	42	N/A	27
Dump Truck	2	42	N/A	27
Water Truck	1	42	N/A	27
Concrete Mixer Truck	3	13	N/A	60
Lowboy Truck/Trailer	1	26	N/A	27
Flat Bed Truck/Trailer	3	26	N/A	27
Worker Commute	8	42	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Table 74**  
**Transmission and Subtransmission Construction Emissions**  
**Vault Installation**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92
Dump Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Concrete Mixer Truck	0.08	0.51	2.98	0.01	0.10	0.05	637.25	0.00	0.02	644.05
Lowboy Truck/Trailer	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Truck/Trailer	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.24</b>	<b>3.40</b>	<b>6.43</b>	<b>0.02</b>	<b>0.26</b>	<b>0.12</b>	<b>1670.23</b>	<b>0.03</b>	<b>0.06</b>	<b>1688.36</b>
<b>Total</b>	<b>0.24</b>	<b>3.40</b>	<b>6.43</b>	<b>0.02</b>	<b>0.26</b>	<b>0.12</b>	<b>1670.23</b>	<b>0.03</b>	<b>0.06</b>	<b>1688.36</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.86
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.01	0.00	0.00	4.06
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.01	0.00	0.00	2.03
Concrete Mixer Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.14	0.00	0.00	4.19
Lowboy Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	1.24	0.00	0.00	1.26
Flat Bed Truck/Trailer	0.00	0.00	0.02	0.00	0.00	0.00	3.73	0.00	0.00	3.77
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.79	0.00	0.00	6.87
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.78</b>	<b>0.00</b>	<b>0.00</b>	<b>23.03</b>
<b>Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.78</b>	<b>0.00</b>	<b>0.00</b>	<b>23.03</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 74  
Transmission and Subtransmission Construction Emissions  
Vault Installation**

<b>Offsite</b>										
1-Ton Truck, 4x4	2	Unpaved	17	42	1.311	0.131	44.56	4.46	0.94	0.09
1-Ton Truck, 4x4	2	Paved	10	42	0.003	0.001	0.07	0.02	0.00	0.00
Dump Truck	2	Unpaved	17	42	2.273	0.227	77.28	7.73	1.62	0.16
Dump Truck	2	Paved	10	42	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	1	Unpaved	17	42	2.273	0.227	38.64	3.86	0.81	0.08
Water Truck	1	Paved	10	42	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Mixer Truck	3	Unpaved	17	13	2.273	0.227	115.92	11.59	0.75	0.08
Concrete Mixer Truck	3	Paved	43	13	0.003	0.001	0.43	0.11	0.00	0.00
Lowboy Truck/Trailer	1	Unpaved	17	26	2.273	0.227	38.64	3.86	0.50	0.05
Lowboy Truck/Trailer	1	Paved	10	26	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Truck/Trailer	3	Unpaved	17	26	2.273	0.227	115.92	11.59	1.51	0.15
Flat Bed Truck/Trailer	3	Paved	10	26	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	8	Paved	58	42	0.003	0.001	1.54	0.38	0.03	0.01
<b>Offsite Total</b>							<b>433.25</b>	<b>43.66</b>	<b>6.17</b>	<b>0.62</b>
<b>Total</b>							<b>433.25</b>	<b>43.66</b>	<b>6.17</b>	<b>0.62</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling <sup>d</sup>	CY	99	1386	6.65E-02	1.01E-02	6.58	1.00	0.05	0.01
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>6.58</b>	<b>1.00</b>	<b>0.05</b>	<b>0.01</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Daily based on 1 vault/day, 11 ft.-2 in. x 21 ft.-4 in. x 11 ft.-2 in.; total based on 14 vaults

**Table 75  
Transmission and Subtransmission Construction Emissions  
Duct Bank Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.87	5.67	5.90	0.01	0.37	0.34	952.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	4.92	0.74	
<b>Onsite Total</b>	<b>0.87</b>	<b>5.67</b>	<b>5.90</b>	<b>0.01</b>	<b>5.29</b>	<b>1.09</b>	<b>952.9</b>
Offsite Motor Vehicle Exhaust	0.26	3.56	7.32	0.02	0.29	0.13	1,881.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	510.60	51.40	
<b>Offsite Total</b>	<b>0.26</b>	<b>3.56</b>	<b>7.32</b>	<b>0.02</b>	<b>510.88</b>	<b>51.53</b>	<b>1881.6</b>
<b>Total</b>	<b>1.13</b>	<b>9.22</b>	<b>13.22</b>	<b>0.03</b>	<b>516.17</b>	<b>52.62</b>	<b>2834.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.10	0.10	0.00	0.01	0.01	16.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.09	0.01	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.10</b>	<b>0.10</b>	<b>0.00</b>	<b>0.09</b>	<b>0.02</b>	<b>16.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.06	0.09	0.00	0.00	0.00	23.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.09	0.71	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.09</b>	<b>0.00</b>	<b>7.10</b>	<b>0.72</b>	<b>23.9</b>
<b>Total</b>	<b>0.02</b>	<b>0.15</b>	<b>0.18</b>	<b>0.00</b>	<b>7.19</b>	<b>0.73</b>	<b>40.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	1	30	5
Backhoe/Front Loader	125	1	35	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	0.31	1.58	2.00	0.00	0.17	0.15	234.54	0.03	0.01	237.0
Backhoe/Front Loader	0.55	4.09	3.90	0.01	0.20	0.19	709.07	0.05	0.02	715.9
<b>Total</b>	<b>0.87</b>	<b>5.67</b>	<b>5.90</b>	<b>0.01</b>	<b>0.37</b>	<b>0.34</b>	<b>943.61</b>	<b>0.08</b>	<b>0.02</b>	<b>952.90</b>

**Table 75  
Transmission and Subtransmission Construction Emissions  
Duct Bank Installation**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.00	0.02	0.03	0.00	0.00	0.00	3.52	0.00	0.00	3.6
Backhoe/Front Loader	0.01	0.07	0.07	0.00	0.00	0.00	12.41	0.00	0.00	12.5
<b>Total</b>	<b>0.01</b>	<b>0.10</b>	<b>0.10</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>15.93</b>	<b>0.00</b>	<b>0.00</b>	<b>16.08</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	35	N/A	27
Dump Truck	3	30	N/A	27
Water Truck	1	35	N/A	27
Concrete Mixer Truck	3	10	N/A	60
Lowboy Truck/Trailer	1	35	N/A	27
Flat Bed Truck/Trailer	3	35	N/A	27
Pipe Truck/Trailer	1	30	N/A	27
Worker Commute	8	35	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Pipe Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

**Table 75  
Transmission and Subtransmission Construction Emissions  
Duct Bank Installation**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92
Dump Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Concrete Mixer Truck	0.08	0.51	2.98	0.01	0.10	0.05	637.25	0.00	0.02	644.05
Lowboy Truck/Trailer	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Truck/Trailer	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Pipe Truck/Trailer	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.26</b>	<b>3.56</b>	<b>7.32</b>	<b>0.02</b>	<b>0.29</b>	<b>0.13</b>	<b>1861.40</b>	<b>0.03</b>	<b>0.06</b>	<b>1881.57</b>
<b>Total</b>	<b>0.26</b>	<b>3.56</b>	<b>7.32</b>	<b>0.02</b>	<b>0.29</b>	<b>0.13</b>	<b>1861.40</b>	<b>0.03</b>	<b>0.06</b>	<b>1881.57</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.72
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.30	0.00	0.00	4.35
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.67	0.00	0.00	1.69
Concrete Mixer Truck	0.00	0.00	0.01	0.00	0.00	0.00	3.19	0.00	0.00	3.22
Lowboy Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	1.67	0.00	0.00	1.69
Flat Bed Truck/Trailer	0.00	0.00	0.02	0.00	0.00	0.00	5.02	0.00	0.00	5.07
Pipe Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	1.43	0.00	0.00	1.45
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.65</b>	<b>0.00</b>	<b>0.00</b>	<b>23.91</b>
<b>Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.65</b>	<b>0.00</b>	<b>0.00</b>	<b>23.91</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00



**Table 75**  
**Transmission and Subtransmission Construction Emissions**  
**Duct Bank Installation**

<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	2	Unpaved	17	35	1.311	0.131	44.56	4.46	0.78	0.08
1-Ton Truck, 4x4	2	Paved	10	35	0.003	0.001	0.07	0.02	0.00	0.00
Dump Truck	3	Unpaved	17	30	2.273	0.227	115.92	11.59	1.74	0.17
Dump Truck	3	Paved	10	30	0.003	0.001	0.10	0.02	0.00	0.00
Water Truck	1	Unpaved	17	35	2.273	0.227	38.64	3.86	0.68	0.07
Water Truck	1	Paved	10	35	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Mixer Truck	3	Unpaved	17	10	2.273	0.227	115.92	11.59	0.58	0.06
Concrete Mixer Truck	3	Paved	43	10	0.003	0.001	0.43	0.11	0.00	0.00
Lowboy Truck/Trailer	1	Unpaved	17	35	2.273	0.227	38.64	3.86	0.68	0.07
Lowboy Truck/Trailer	1	Paved	10	35	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Truck/Trailer	3	Unpaved	17	35	2.273	0.227	115.92	11.59	2.03	0.20
Flat Bed Truck/Trailer	3	Paved	10	35	0.003	0.001	0.10	0.02	0.00	0.00
Pipe Truck/Trailer	1	Unpaved	17	30	2.273	0.227	38.64	3.86	0.58	0.06
Pipe Truck/Trailer	1	Paved	10	30	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	8	Paved	58	35	0.003	0.001	1.54	0.38	0.03	0.01
<b>Offsite Total</b>							<b>510.60</b>	<b>51.40</b>	<b>7.09</b>	<b>0.71</b>
<b>Total</b>							<b>510.60</b>	<b>51.40</b>	<b>7.09</b>	<b>0.71</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling <sup>d</sup>	CY	74	2593	6.65E-02	1.01E-02	4.92	0.74	0.09	0.01
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>4.92</b>	<b>0.74</b>	<b>0.09</b>	<b>0.01</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Based on 24 in. x 60 in. x 7,000 ft. over 35 days

**Table 76**  
**Transmission and Subtransmission Construction Emissions**  
**Install Underground Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	4.07	16.16	40.04	0.08	1.28	1.18	8,125.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>4.07</b>	<b>16.16</b>	<b>40.04</b>	<b>0.08</b>	<b>1.28</b>	<b>1.18</b>	<b>8125.4</b>
Offsite Motor Vehicle Exhaust	0.21	3.20	5.23	0.01	0.22	0.09	1,430.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	471.59	47.45	
<b>Offsite Total</b>	<b>0.21</b>	<b>3.20</b>	<b>5.23</b>	<b>0.01</b>	<b>471.81</b>	<b>47.54</b>	<b>1430.7</b>
<b>Total</b>	<b>4.28</b>	<b>19.35</b>	<b>45.27</b>	<b>0.09</b>	<b>473.09</b>	<b>48.72</b>	<b>9556.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.06	0.25	0.61	0.00	0.02	0.02	128.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.06</b>	<b>0.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>128.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.08	0.00	0.00	0.00	23.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.52	0.76	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.08</b>	<b>0.00</b>	<b>7.52</b>	<b>0.76</b>	<b>23.2</b>
<b>Total</b>	<b>0.06</b>	<b>0.30</b>	<b>0.69</b>	<b>0.00</b>	<b>7.54</b>	<b>0.78</b>	<b>152.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Manlift/Bucket Truck	250	4	35	5
Boom/Crane Truck	350	1	7	7
Puller	350	2	35	5

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Manlift/Bucket Truck	250	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Puller	350	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Manlift/Bucket Truck	1.90	8.19	22.14	0.04	0.66	0.61	4253.30	0.17	0.11	4,291.1
Boom/Crane Truck	0.93	3.10	7.50	0.01	0.27	0.25	1259.58	0.08	0.03	1,271.5

**Table 76**  
**Transmission and Subtransmission Construction Emissions**  
**Install Underground Cable**

Puller	1.24	4.86	10.40	0.02	0.35	0.32	2540.10	0.11	0.07	2,562.9
<b>Total</b>	<b>4.07</b>	<b>16.16</b>	<b>40.04</b>	<b>0.08</b>	<b>1.28</b>	<b>1.18</b>	<b>8052.98</b>	<b>0.37</b>	<b>0.21</b>	<b>8125.45</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Manlift/Bucket Truck	0.03	0.14	0.39	0.00	0.01	0.01	74.43	0.00	0.00	75.1
Boom/Crane Truck	0.00	0.02	0.04	0.00	0.00	0.00	8.89	0.00	0.00	9.0
Puller	0.02	0.09	0.18	0.00	0.01	0.01	44.45	0.00	0.00	44.9
<b>Total</b>	<b>0.06</b>	<b>0.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>127.77</b>	<b>0.01</b>	<b>0.00</b>	<b>128.91</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	35	N/A	27
Manlift/Bucket Truck	4	35	N/A	27
Boom/Crane Truck	1	7	N/A	27
Water Truck	1	35	N/A	27
Pipe Truck/Trailer	1	30	N/A	27
Wire Truck/Trailer	1	30	N/A	27
Flat Bed Truck/Trailer	3	35	N/A	27
Worker Commute	8	35	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Pipe Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Wire Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Table 76**  
**Transmission and Subtransmission Construction Emissions**  
**Install Underground Cable**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92
Manlift/Bucket Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Boom/Crane Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Pipe Truck/Trailer	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Wire Truck/Trailer	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Truck/Trailer	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.21</b>	<b>3.20</b>	<b>5.23</b>	<b>0.01</b>	<b>0.22</b>	<b>0.09</b>	<b>1415.33</b>	<b>0.03</b>	<b>0.05</b>	<b>1430.73</b>
<b>Total</b>	<b>0.21</b>	<b>3.20</b>	<b>5.23</b>	<b>0.01</b>	<b>0.22</b>	<b>0.09</b>	<b>1415.33</b>	<b>0.03</b>	<b>0.05</b>	<b>1430.73</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.72
Manlift/Bucket Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.69	0.00	0.00	6.76
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.34
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.67	0.00	0.00	1.69
Pipe Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	1.43	0.00	0.00	1.45
Wire Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	1.43	0.00	0.00	1.45
Flat Bed Truck/Trailer	0.00	0.00	0.02	0.00	0.00	0.00	5.02	0.00	0.00	5.07
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.95</b>	<b>0.00</b>	<b>0.00</b>	<b>23.20</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.95</b>	<b>0.00</b>	<b>0.00</b>	<b>23.20</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00

**Table 76**  
**Transmission and Subtransmission Construction Emissions**  
**Install Underground Cable**

<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	2	Unpaved	17	35	1.311	0.131	44.56	4.46	0.78	0.08
1-Ton Truck, 4x4	2	Paved	10	35	0.003	0.001	0.07	0.02	0.00	0.00
Manlift/Bucket Truck	4	Unpaved	17	35	2.273	0.227	154.57	15.46	2.70	0.27
Manlift/Bucket Truck	4	Paved	10	35	0.003	0.001	0.13	0.03	0.00	0.00
Boom/Crane Truck	1	Unpaved	17	7	2.273	0.227	38.64	3.86	0.14	0.01
Boom/Crane Truck	1	Paved	10	7	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	17	35	2.273	0.227	38.64	3.86	0.68	0.07
Water Truck	1	Paved	10	35	0.003	0.001	0.03	0.01	0.00	0.00
Pipe Truck/Trailer	1	Unpaved	17	30	2.273	0.227	38.64	3.86	0.58	0.06
Pipe Truck/Trailer	1	Paved	10	30	0.003	0.001	0.03	0.01	0.00	0.00
Wire Truck/Trailer	1	Unpaved	17	30	2.273	0.227	38.64	3.86	0.58	0.06
Wire Truck/Trailer	1	Paved	10	30	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Truck/Trailer	3	Unpaved	17	35	2.273	0.227	115.92	11.59	2.03	0.20
Flat Bed Truck/Trailer	3	Paved	10	35	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	8	Paved	58	35	0.003	0.001	1.54	0.38	0.03	0.01
<b>Offsite Total</b>							<b>471.59</b>	<b>47.45</b>	<b>7.52</b>	<b>0.76</b>
<b>Total</b>							<b>471.59</b>	<b>47.45</b>	<b>7.52</b>	<b>0.76</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 77**  
**Transmission and Subtransmission Construction Emissions**  
**Restoration**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	5.94	28.86	44.31	0.08	2.24	2.06	7,043.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	2414.68	799.87	
<b>Onsite Total</b>	<b>5.94</b>	<b>28.86</b>	<b>44.31</b>	<b>0.08</b>	<b>2416.92</b>	<b>801.93</b>	<b>7043.6</b>
Offsite Motor Vehicle Exhaust	0.26	6.42	2.24	0.01	0.20	0.04	1,282.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	260.77	26.71	
<b>Offsite Total</b>	<b>0.26</b>	<b>6.42</b>	<b>2.24</b>	<b>0.01</b>	<b>260.97</b>	<b>26.75</b>	<b>1282.0</b>
<b>Total</b>	<b>6.20</b>	<b>35.28</b>	<b>46.55</b>	<b>0.09</b>	<b>2677.88</b>	<b>828.68</b>	<b>8325.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.17	1.01	1.16	0.00	0.08	0.08	162.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	84.51	28.00	
<b>Onsite Total</b>	<b>0.17</b>	<b>1.01</b>	<b>1.16</b>	<b>0.00</b>	<b>84.60</b>	<b>28.07</b>	<b>162.7</b>
Offsite Motor Vehicle Exhaust	0.01	0.22	0.08	0.00	0.01	0.00	44.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	9.13	0.93	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.22</b>	<b>0.08</b>	<b>0.00</b>	<b>9.13</b>	<b>0.94</b>	<b>44.9</b>
<b>Total</b>	<b>0.18</b>	<b>1.24</b>	<b>1.24</b>	<b>0.00</b>	<b>93.73</b>	<b>29.01</b>	<b>207.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	125	3	70	7
Motor Grader	250	3	70	7
Drum Type Compactor	100	3	70	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Motor Grader	250	0.125	0.393	1.043	0.002	0.036	0.033	171.959	0.011	0.004	Graders
Drum Type Compactor	100	0.079	0.397	0.511	0.001	0.042	0.038	58.936	0.007	0.002	Rollers

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	1.65	12.27	11.69	0.02	0.61	0.56	2127.21	0.15	0.06	2,147.6

**Table 77**  
**Transmission and Subtransmission Construction Emissions**  
**Restoration**

Motor Grader	2.62	8.26	21.90	0.04	0.75	0.69	3611.13	0.24	0.09	3,645.2
Drum Type Compactor	1.67	8.33	10.72	0.01	0.87	0.80	1237.65	0.15	0.03	1,250.9
<b>Total</b>	<b>5.94</b>	<b>28.86</b>	<b>44.31</b>	<b>0.08</b>	<b>2.24</b>	<b>2.06</b>	<b>6976.00</b>	<b>0.54</b>	<b>0.18</b>	<b>7043.63</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.06	0.43	0.41	0.00	0.02	0.02	74.45	0.01	0.00	75.2
Motor Grader	0.06	0.29	0.38	0.00	0.03	0.03	43.32	0.01	0.00	43.8
Drum Type Compactor	0.06	0.29	0.38	0.00	0.03	0.03	43.32	0.01	0.00	43.8
<b>Total</b>	<b>0.17</b>	<b>1.01</b>	<b>1.16</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>161.09</b>	<b>0.02</b>	<b>0.00</b>	<b>162.73</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	6	70	N/A	27
Water Truck	3	70	N/A	27
Lowboy Truck/Trailer	3	70	N/A	1
Worker Commute	21	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 77**  
**Transmission and Subtransmission Construction Emissions**  
**Restoration**

Offsite										
1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Water Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Lowboy Truck/Trailer	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.21	6.12	0.67	0.01	0.13	0.00	849.02	0.05	0.03	858.71
<b>Offsite Total</b>	<b>0.26</b>	<b>6.42</b>	<b>2.24</b>	<b>0.01</b>	<b>0.20</b>	<b>0.04</b>	<b>1267.71</b>	<b>0.05</b>	<b>0.04</b>	<b>1282.02</b>
<b>Total</b>	<b>0.26</b>	<b>6.42</b>	<b>2.24</b>	<b>0.01</b>	<b>0.20</b>	<b>0.04</b>	<b>1267.71</b>	<b>0.05</b>	<b>0.04</b>	<b>1282.02</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	4.25	0.00	0.00	4.30
Water Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.04	0.00	0.00	10.14
Lowboy Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
Worker Commute	0.01	0.21	0.02	0.00	0.00	0.00	29.72	0.00	0.00	30.05
<b>Offsite Total</b>	<b>0.01</b>	<b>0.22</b>	<b>0.08</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>44.37</b>	<b>0.00</b>	<b>0.00</b>	<b>44.87</b>
<b>Total</b>	<b>0.01</b>	<b>0.22</b>	<b>0.08</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>44.37</b>	<b>0.00</b>	<b>0.00</b>	<b>44.87</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	6	Unpaved	17	70	1.311	0.131	133.67	13.37	4.68	0.47
1-Ton Truck, 4x4	6	Paved	10	70	0.003	0.001	0.20	0.05	0.01	0.00
Water Truck	3	Unpaved	17	70	2.273	0.227	115.92	11.59	4.06	0.41
Water Truck	3	Paved	10	70	0.003	0.001	0.10	0.02	0.00	0.00
Lowboy Truck/Trailer	3	Unpaved	1	70	2.273	0.227	6.82	0.68	0.24	0.02
Lowboy Truck/Trailer	3	Paved	0	70	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	21	Paved	58	70	0.003	0.001	4.06	1.00	0.14	0.03
<b>Offsite Total</b>							<b>260.77</b>	<b>26.71</b>	<b>9.13</b>	<b>0.93</b>
<b>Total</b>							<b>260.77</b>	<b>26.71</b>	<b>9.13</b>	<b>0.93</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]



**Table 77**  
**Transmission and Subtransmission Construction Emissions**  
**Restoration**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr	21	1470	114.985	38.089	2414.68	799.87	84.51	28.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>2414.68</b>	<b>799.87</b>	<b>84.51</b>	<b>28.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 78**  
**Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 1) - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.05	1.25	0.61	0.00	0.04	0.01	274.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	24.30	2.56	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>24.34</b>	<b>2.57</b>	<b>274.4</b>
<b>Total</b>	<b>1.57</b>	<b>7.80</b>	<b>18.32</b>	<b>0.04</b>	<b>24.87</b>	<b>3.05</b>	<b>3707.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.10	0.27	0.00	0.01	0.01	51.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.10</b>	<b>0.27</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>51.5</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	4.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.36	0.04	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.37</b>	<b>0.04</b>	<b>4.1</b>
<b>Total</b>	<b>0.02</b>	<b>0.12</b>	<b>0.27</b>	<b>0.00</b>	<b>0.37</b>	<b>0.05</b>	<b>55.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	30	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9

**Table 78**  
**Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 1) - Install Cable**

<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>
--------------	-------------	-------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.10	0.27	0.00	0.01	0.01	51.04	0.00	0.00	51.5
<b>Total</b>	<b>0.02</b>	<b>0.10</b>	<b>0.27</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>51.04</b>	<b>0.00</b>	<b>0.00</b>	<b>51.49</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	30	N/A	14
Bucket Truck	2	30	N/A	14
Worker Commute	4	30	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 78**  
**Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 1) - Install Cable**

Offsite										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
Bucket Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>271.33</b>	<b>0.01</b>	<b>0.01</b>	<b>274.36</b>
<b>Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>271.33</b>	<b>0.01</b>	<b>0.01</b>	<b>274.36</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.49	0.00	0.00	1.50
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.43	0.00	0.00	2.45
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.07</b>	<b>0.00</b>	<b>0.00</b>	<b>4.12</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.07</b>	<b>0.00</b>	<b>0.00</b>	<b>4.12</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	30	1.311	0.131	5.24	0.52	0.08	0.01
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	30	0.003	0.001	0.03	0.01	0.00	0.00
Bucket Truck	2	Unpaved	4	30	2.273	0.227	18.18	1.82	0.27	0.03
Bucket Truck	2	Paved	10	30	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	30	0.003	0.001	0.77	0.19	0.01	0.00
<b>Offsite Total</b>							<b>24.30</b>	<b>2.56</b>	<b>0.36</b>	<b>0.04</b>
<b>Total</b>							<b>24.30</b>	<b>2.56</b>	<b>0.36</b>	<b>0.04</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 78**  
**Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 1) - Install Cable**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 79**  
**Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 1) - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.18	0.16	0.00	0.03	0.00	184.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	11.32	1.25	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>11.35</b>	<b>1.26</b>	<b>184.8</b>
<b>Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>11.35</b>	<b>1.26</b>	<b>184.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table 79**  
**Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 1) - Splice Fiber Optic Cable**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	2	N/A	14
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.01	0.03	0.00	0.00	0.00	20.97	0.00	0.00	21.22

**Table 79**  
**Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 1) - Splice Fiber Optic Cable**

Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>182.69</b>	<b>0.01</b>	<b>0.01</b>	<b>184.78</b>
<b>Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>182.69</b>	<b>0.01</b>	<b>0.01</b>	<b>184.78</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	4	2	1.311	0.131	10.48	1.05	0.01	0.00
Splicing Lab	2	Paved	10	2	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	4	0.003	0.001	0.77	0.19	0.00	0.00
<b>Offsite Total</b>							<b>11.32</b>	<b>1.25</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>11.32</b>	<b>1.25</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**



**Table 79**  
**Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 1) - Splice Fiber Optic Cable**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 80**  
**Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 1) - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.86	0.28	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>2.07</b>	<b>0.47</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.68	1.42	0.01	0.07	0.02	490.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	29.09	3.09	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>29.16</b>	<b>3.12</b>	<b>490.4</b>
<b>Total</b>	<b>0.90</b>	<b>4.50</b>	<b>7.74</b>	<b>0.02</b>	<b>31.23</b>	<b>3.59</b>	<b>1875.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.02	0.03	0.00	0.00	0.00	7.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>7.6</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.16	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.16</b>	<b>0.02</b>	<b>2.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.17</b>	<b>0.02</b>	<b>10.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	11	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 80**  
**Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 1) - Underground Conduit and Structures**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.02	0.03	0.00	0.00	0.00	7.55	0.00	0.00	7.6
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.55</b>	<b>0.00</b>	<b>0.00</b>	<b>7.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	11	N/A	14
1-Ton Crew Cab Flatbed, 4x4	1	11	N/A	14
Water Truck	1	11	N/A	14
Concrete Truck	1	11	N/A	60
Worker Commute	5	11	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
Water Truck	0.01	0.04	0.23	0.00	0.01	0.00	49.56	0.00	0.00	50.09

**Table 80**  
**Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 1) - Underground Conduit and Structures**

Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>485.09</b>	<b>0.01</b>	<b>0.02</b>	<b>490.45</b>
<b>Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>485.09</b>	<b>0.01</b>	<b>0.02</b>	<b>490.45</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.06
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.06
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.28
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.17	0.00	0.00	1.18
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.11	0.00	0.00	1.12
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.67</b>	<b>0.00</b>	<b>0.00</b>	<b>2.70</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.67</b>	<b>0.00</b>	<b>0.00</b>	<b>2.70</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	4	11	1.102	0.110	4.41	0.44	0.02	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	11	1.311	0.131	5.24	0.52	0.03	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	4	11	2.273	0.227	9.09	0.91	0.05	0.01
Water Truck	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Truck	1	Unpaved	4	11	2.273	0.227	9.09	0.91	0.05	0.01
Concrete Truck	1	Paved	56	11	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	58	11	0.003	0.001	0.97	0.24	0.01	0.00
<b>Offsite Total</b>							<b>29.09</b>	<b>3.09</b>	<b>0.16</b>	<b>0.02</b>
<b>Total</b>							<b>29.09</b>	<b>3.09</b>	<b>0.16</b>	<b>0.02</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 80**  
**Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 1) - Underground Conduit and Structures**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	28	311	6.65E-02	1.01E-02	1.86	0.28	0.01	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.86</b>	<b>0.28</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 2,800 ft. long x 1 ft. wide x 3 ft. deep over 11 days

**Table 81**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.05	1.25	0.61	0.00	0.04	0.01	274.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	24.30	2.56	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>24.34</b>	<b>2.57</b>	<b>274.4</b>
<b>Total</b>	<b>1.57</b>	<b>7.80</b>	<b>18.32</b>	<b>0.04</b>	<b>24.87</b>	<b>3.05</b>	<b>3707.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.05	0.13	0.00	0.00	0.00	25.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.13</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>25.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	2.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.18	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.18</b>	<b>0.02</b>	<b>2.1</b>
<b>Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.14</b>	<b>0.00</b>	<b>0.19</b>	<b>0.02</b>	<b>27.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	15	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9

**Table 81**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Install Cable**

<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>
--------------	-------------	-------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.01	0.05	0.13	0.00	0.00	0.00	25.52	0.00	0.00	25.7
<b>Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.13</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>25.52</b>	<b>0.00</b>	<b>0.00</b>	<b>25.75</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	15	N/A	14
Bucket Truck	2	15	N/A	14
Worker Commute	4	15	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 81**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Install Cable**

Offsite										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
Bucket Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>271.33</b>	<b>0.01</b>	<b>0.01</b>	<b>274.36</b>
<b>Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>271.33</b>	<b>0.01</b>	<b>0.01</b>	<b>274.36</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.08
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.75
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.21	0.00	0.00	1.23
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.03</b>	<b>0.00</b>	<b>0.00</b>	<b>2.06</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.03</b>	<b>0.00</b>	<b>0.00</b>	<b>2.06</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	15	1.311	0.131	5.24	0.52	0.04	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	15	0.003	0.001	0.03	0.01	0.00	0.00
Bucket Truck	2	Unpaved	4	15	2.273	0.227	18.18	1.82	0.14	0.01
Bucket Truck	2	Paved	10	15	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	15	0.003	0.001	0.77	0.19	0.01	0.00
<b>Offsite Total</b>							<b>24.30</b>	<b>2.56</b>	<b>0.18</b>	<b>0.02</b>
<b>Total</b>							<b>24.30</b>	<b>2.56</b>	<b>0.18</b>	<b>0.02</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]



**Table 81**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Install Cable**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 82**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.18	0.16	0.00	0.03	0.00	184.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	11.32	1.25	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>11.35</b>	<b>1.26</b>	<b>184.8</b>
<b>Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>11.35</b>	<b>1.26</b>	<b>184.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table 82**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Splice Fiber Optic Cable**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	2	N/A	14
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.01	0.03	0.00	0.00	0.00	20.97	0.00	0.00	21.22

**Table 82**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Splice Fiber Optic Cable**

Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>182.69</b>	<b>0.01</b>	<b>0.01</b>	<b>184.78</b>
<b>Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>182.69</b>	<b>0.01</b>	<b>0.01</b>	<b>184.78</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	4	2	1.311	0.131	10.48	1.05	0.01	0.00
Splicing Lab	2	Paved	10	2	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	4	0.003	0.001	0.77	0.19	0.00	0.00
<b>Offsite Total</b>							<b>11.32</b>	<b>1.25</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>11.32</b>	<b>1.25</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 82**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Splice Fiber Optic Cable**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 83**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.06	0.16	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>1.27</b>	<b>0.35</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.68	1.42	0.01	0.07	0.02	490.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	29.09	3.09	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>29.16</b>	<b>3.12</b>	<b>490.4</b>
<b>Total</b>	<b>0.90</b>	<b>4.50</b>	<b>7.74</b>	<b>0.02</b>	<b>30.43</b>	<b>3.47</b>	<b>1875.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	4.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.8</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>1.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.11</b>	<b>0.01</b>	<b>6.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	7	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 83**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Underground Conduit and Structures**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.01	0.02	0.00	0.00	0.00	4.80	0.00	0.00	4.8
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.80</b>	<b>0.00</b>	<b>0.00</b>	<b>4.85</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	7	N/A	14
1-Ton Crew Cab Flatbed, 4x4	1	7	N/A	14
Water Truck	1	7	N/A	14
Concrete Truck	1	7	N/A	60
Worker Commute	5	7	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
Water Truck	0.01	0.04	0.23	0.00	0.01	0.00	49.56	0.00	0.00	50.09

**Table 83**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Underground Conduit and Structures**

Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>485.09</b>	<b>0.01</b>	<b>0.02</b>	<b>490.45</b>
<b>Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>485.09</b>	<b>0.01</b>	<b>0.02</b>	<b>490.45</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.18
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.75
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.70</b>	<b>0.00</b>	<b>0.00</b>	<b>1.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.70</b>	<b>0.00</b>	<b>0.00</b>	<b>1.72</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	4	7	1.102	0.110	4.41	0.44	0.02	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	10	7	0.003	0.001	0.03	0.01	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	7	1.311	0.131	5.24	0.52	0.02	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	7	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	4	7	2.273	0.227	9.09	0.91	0.03	0.00
Water Truck	1	Paved	10	7	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Truck	1	Unpaved	4	7	2.273	0.227	9.09	0.91	0.03	0.00
Concrete Truck	1	Paved	56	7	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	58	7	0.003	0.001	0.97	0.24	0.00	0.00
<b>Offsite Total</b>							<b>29.09</b>	<b>3.09</b>	<b>0.10</b>	<b>0.01</b>
<b>Total</b>							<b>29.09</b>	<b>3.09</b>	<b>0.10</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]



**Table 83**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Underground Conduit and Structures**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	16	111	6.65E-02	1.01E-02	1.06	0.16	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.06</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 1,000 ft. long x 1 ft. wide x 3 ft. deep over 7 days

**Table 84**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.05	1.24	0.54	0.00	0.04	0.01	258.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	12.59	1.39	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.24</b>	<b>0.54</b>	<b>0.00</b>	<b>12.62</b>	<b>1.39</b>	<b>258.5</b>
<b>Total</b>	<b>1.57</b>	<b>7.79</b>	<b>18.25</b>	<b>0.04</b>	<b>13.15</b>	<b>1.88</b>	<b>3691.4</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.08	0.22	0.00	0.01	0.01	42.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.08</b>	<b>0.22</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>42.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	3.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.16	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.16</b>	<b>0.02</b>	<b>3.2</b>
<b>Total</b>	<b>0.02</b>	<b>0.10</b>	<b>0.23</b>	<b>0.00</b>	<b>0.16</b>	<b>0.02</b>	<b>46.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	25	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9

**Table 84**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Install Cable**

<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>
--------------	-------------	-------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.08	0.22	0.00	0.01	0.01	42.53	0.00	0.00	42.9
<b>Total</b>	<b>0.02</b>	<b>0.08</b>	<b>0.22</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>42.53</b>	<b>0.00</b>	<b>0.00</b>	<b>42.91</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	25	N/A	12
Bucket Truck	2	25	N/A	12
Worker Commute	4	25	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 84**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Install Cable**

Offsite										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.99	0.00	0.00	9.09
Bucket Truck	0.01	0.07	0.40	0.00	0.01	0.01	84.97	0.00	0.00	85.87
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.05</b>	<b>1.24</b>	<b>0.54</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>255.67</b>	<b>0.01</b>	<b>0.01</b>	<b>258.53</b>
<b>Total</b>	<b>0.05</b>	<b>1.24</b>	<b>0.54</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>255.67</b>	<b>0.01</b>	<b>0.01</b>	<b>258.53</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.00	0.00	1.07
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	2.02	0.00	0.00	2.04
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.20</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.20</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	2	25	1.311	0.131	2.62	0.26	0.03	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	25	0.003	0.001	0.03	0.01	0.00	0.00
Bucket Truck	2	Unpaved	2	25	2.273	0.227	9.09	0.91	0.11	0.01
Bucket Truck	2	Paved	10	25	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	25	0.003	0.001	0.77	0.19	0.01	0.00
<b>Offsite Total</b>							<b>12.59</b>	<b>1.39</b>	<b>0.16</b>	<b>0.02</b>
<b>Total</b>							<b>12.59</b>	<b>1.39</b>	<b>0.16</b>	<b>0.02</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 84**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Install Cable**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 85**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.15	0.00	0.03	0.00	181.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	6.08	0.73	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>6.11</b>	<b>0.73</b>	<b>181.7</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>6.11</b>	<b>0.73</b>	<b>181.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table 85**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Splice Fiber Optic Cable**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	2	N/A	12
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.01	0.03	0.00	0.00	0.00	17.97	0.00	0.00	18.19

**Table 85  
Telecommunications Construction Emissions  
OPGW Underground Crossing near SR-18 (Segment 5) - Splice Fiber Optic Cable**

Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>179.69</b>	<b>0.01</b>	<b>0.01</b>	<b>181.75</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>179.69</b>	<b>0.01</b>	<b>0.01</b>	<b>181.75</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	2	2	1.311	0.131	5.24	0.52	0.01	0.00
Splicing Lab	2	Paved	10	2	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	4	0.003	0.001	0.77	0.19	0.00	0.00
<b>Offsite Total</b>							<b>6.08</b>	<b>0.73</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>6.08</b>	<b>0.73</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**



**Table 85**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Splice Fiber Optic Cable**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 86**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.66	0.25	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>1.87</b>	<b>0.44</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.67	1.38	0.01	0.07	0.02	480.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	15.18	1.70	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.67</b>	<b>1.38</b>	<b>0.01</b>	<b>15.25</b>	<b>1.72</b>	<b>480.3</b>
<b>Total</b>	<b>0.90</b>	<b>4.49</b>	<b>7.70</b>	<b>0.02</b>	<b>17.12</b>	<b>2.17</b>	<b>1865.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.02	0.03	0.00	0.00	0.00	7.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>7.6</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.08	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>2.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>10.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	11	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 86**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Underground Conduit and Structures**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.02	0.03	0.00	0.00	0.00	7.55	0.00	0.00	7.6
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.55</b>	<b>0.00</b>	<b>0.00</b>	<b>7.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	11	N/A	12
1-Ton Crew Cab Flatbed, 4x4	1	11	N/A	12
Water Truck	1	11	N/A	12
Concrete Truck	1	11	N/A	60
Worker Commute	5	11	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.99	0.00	0.00	9.09
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.99	0.00	0.00	9.09
Water Truck	0.01	0.03	0.20	0.00	0.01	0.00	42.48	0.00	0.00	42.94

**Table 86**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Underground Conduit and Structures**

Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.08</b>	<b>1.67</b>	<b>1.38</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>475.02</b>	<b>0.01</b>	<b>0.02</b>	<b>480.26</b>
<b>Total</b>	<b>0.08</b>	<b>1.67</b>	<b>1.38</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>475.02</b>	<b>0.01</b>	<b>0.02</b>	<b>480.26</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.24
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.17	0.00	0.00	1.18
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.11	0.00	0.00	1.12
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.61</b>	<b>0.00</b>	<b>0.00</b>	<b>2.64</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.61</b>	<b>0.00</b>	<b>0.00</b>	<b>2.64</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	2	11	1.102	0.110	2.20	0.22	0.01	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	2	11	1.311	0.131	2.62	0.26	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	2	11	2.273	0.227	4.55	0.45	0.03	0.00
Water Truck	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Truck	1	Unpaved	2	11	2.273	0.227	4.55	0.45	0.03	0.00
Concrete Truck	1	Paved	58	11	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	58	11	0.003	0.001	0.97	0.24	0.01	0.00
<b>Offsite Total</b>							<b>15.18</b>	<b>1.70</b>	<b>0.08</b>	<b>0.01</b>
<b>Total</b>							<b>15.18</b>	<b>1.70</b>	<b>0.08</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 86**  
**Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Underground Conduit and Structures**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	25	278	6.65E-02	1.01E-02	1.66	0.25	0.01	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.66</b>	<b>0.25</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 2,500 ft. long x 1 ft. wide x 3 ft. deep over 11 days

**Table 87**  
**Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.08	2.34	0.31	0.00	0.05	0.00	339.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	23.51	2.57	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>23.56</b>	<b>2.57</b>	<b>339.0</b>
<b>Total</b>	<b>1.60</b>	<b>8.89</b>	<b>18.02</b>	<b>0.04</b>	<b>24.09</b>	<b>3.06</b>	<b>3771.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.10	0.28	0.00	0.01	0.01	54.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.10</b>	<b>0.28</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>54.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.04	0.00	0.00	0.00	0.00	5.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.16	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.17</b>	<b>0.02</b>	<b>5.4</b>
<b>Total</b>	<b>0.03</b>	<b>0.14</b>	<b>0.29</b>	<b>0.00</b>	<b>0.17</b>	<b>0.03</b>	<b>60.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	32	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9

**Table 87**  
**Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Install Cable**

<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>
--------------	-------------	-------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.10	0.28	0.00	0.01	0.01	54.44	0.00	0.00	54.9
<b>Total</b>	<b>0.02</b>	<b>0.10</b>	<b>0.28</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>54.44</b>	<b>0.00</b>	<b>0.00</b>	<b>54.93</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	32	N/A	1.5
Bucket Truck	2	32	N/A	1.5
Worker Commute	8	32	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 87**  
**Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Install Cable**

Offsite										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Bucket Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>335.18</b>	<b>0.02</b>	<b>0.01</b>	<b>339.00</b>
<b>Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>335.18</b>	<b>0.02</b>	<b>0.01</b>	<b>339.00</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.17
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.17	0.00	0.00	5.23
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.36</b>	<b>0.00</b>	<b>0.00</b>	<b>5.42</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.36</b>	<b>0.00</b>	<b>0.00</b>	<b>5.42</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	32	1.311	0.131	1.97	0.20	0.03	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	0	32	0.003	0.001	0.00	0.00	0.00	0.00
Bucket Truck	2	Unpaved	1.5	32	2.273	0.227	6.82	0.68	0.11	0.01
Bucket Truck	2	Paved	0	32	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	8	Paved	56.5	32	0.003	0.001	1.51	0.37	0.02	0.01
Worker Commute	8	Unpaved	1.5	32	1.102	0.110	13.22	1.32	0.00	0.00
<b>Offsite Total</b>							<b>23.51</b>	<b>2.57</b>	<b>0.16</b>	<b>0.02</b>
<b>Total</b>							<b>23.51</b>	<b>2.57</b>	<b>0.16</b>	<b>0.02</b>

<sup>a</sup> From Table 112



**Table 87**  
**Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Install Cable**

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 88**  
**Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	165.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	11.29	1.24	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>11.32</b>	<b>1.24</b>	<b>165.8</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>11.32</b>	<b>1.24</b>	<b>165.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table 88**  
**Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Splice Fiber Optic Cable**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	4	N/A	1.5
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	2.25	0.00	0.00	2.27

**Table 88**  
**Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Splice Fiber Optic Cable**

Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	1.5	4	1.311	0.131	3.93	0.39	0.01	0.00
Splicing Lab	2	Paved	0	4	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	4	Paved	56.5	4	0.003	0.001	0.75	0.18	0.00	0.00
Worker Commute	4	Unpaved	1.5	4	1.102	0.110	6.61	0.66	0.00	0.00
<b>Offsite Total</b>							<b>11.29</b>	<b>1.24</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>11.29</b>	<b>1.24</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 88**  
**Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Splice Fiber Optic Cable**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 89**

**Telecommunications Construction Emissions**

**OPGW from Last Transmission Towers to Desert View Substation Wall - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.59	0.24	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>1.80</b>	<b>0.43</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.68	1.45	0.01	0.07	0.02	485.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	19.89	2.16	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>19.96</b>	<b>2.19</b>	<b>485.8</b>
<b>Total</b>	<b>0.90</b>	<b>4.50</b>	<b>7.78</b>	<b>0.02</b>	<b>21.77</b>	<b>2.62</b>	<b>1871.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	9.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>9.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	3.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.08	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>3.4</b>
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.05</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>13.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	14	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 89**  
**Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Underground Conduit and Structures**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.01	0.02	0.04	0.00	0.00	0.00	9.61	0.00	0.00	9.7
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.61</b>	<b>0.00</b>	<b>0.00</b>	<b>9.70</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	14	N/A	1.5
1-Ton Crew Cab Flatbed, 4x4	1	14	N/A	1.5
Water Truck	1	14	N/A	18
Concrete Truck	1	14	N/A	60
Worker Commute	5	14	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41

**Table 89**

**Telecommunications Construction Emissions**

**OPGW from Last Transmission Towers to Desert View Substation Wall - Underground Conduit and Structures**

Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>480.53</b>	<b>0.01</b>	<b>0.02</b>	<b>485.82</b>
<b>Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>480.53</b>	<b>0.01</b>	<b>0.02</b>	<b>485.82</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.45
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.49	0.00	0.00	1.50
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.42	0.00	0.00	1.43
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.36</b>	<b>0.00</b>	<b>0.00</b>	<b>3.40</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.36</b>	<b>0.00</b>	<b>0.00</b>	<b>3.40</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	1.5	14	1.102	0.110	1.65	0.17	0.01	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	0	14	0.003	0.001	0.00	0.00	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	14	1.311	0.131	1.97	0.20	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	0	14	0.003	0.001	0.00	0.00	0.00	0.00
Water Truck	1	Unpaved	1.5	14	2.273	0.227	3.41	0.34	0.02	0.00
Water Truck	1	Paved	16.5	14	0.003	0.001	0.05	0.01	0.00	0.00
Concrete Truck	1	Unpaved	1.5	14	2.273	0.227	3.41	0.34	0.02	0.00
Concrete Truck	1	Paved	58.5	14	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	56.5	14	0.003	0.001	0.94	0.23	0.01	0.00
Worker Commute	5	Unpaved	1.5	14	1.102	0.110	8.26	0.83	0.00	0.00
<b>Offsite Total</b>							<b>19.89</b>	<b>2.16</b>	<b>0.08</b>	<b>0.01</b>
<b>Total</b>							<b>19.89</b>	<b>2.16</b>	<b>0.08</b>	<b>0.01</b>

<sup>a</sup> From Table 112



**Table 89**  
**Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Underground Conduit and Structures**

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	24	333	6.65E-02	1.01E-02	1.59	0.24	0.01	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.59</b>	<b>0.24</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 3,000 ft. long x 1 ft. wide x 3 ft. deep over 14 days

**Table 90**  
**Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.08	2.34	0.31	0.00	0.05	0.00	339.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	23.51	2.57	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>23.56</b>	<b>2.57</b>	<b>339.0</b>
<b>Total</b>	<b>1.60</b>	<b>8.89</b>	<b>18.02</b>	<b>0.04</b>	<b>24.09</b>	<b>3.06</b>	<b>3771.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.07	0.18	0.00	0.01	0.00	34.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.18</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>3.4</b>
<b>Total</b>	<b>0.02</b>	<b>0.09</b>	<b>0.18</b>	<b>0.00</b>	<b>0.11</b>	<b>0.02</b>	<b>37.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	20	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9

**Table 90**  
**Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Install Cable**

<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>
--------------	-------------	-------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.07	0.18	0.00	0.01	0.00	34.03	0.00	0.00	34.3
<b>Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.18</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.03</b>	<b>0.00</b>	<b>0.00</b>	<b>34.33</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	20	N/A	1.5
Bucket Truck	2	20	N/A	1.5
Worker Commute	8	20	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 90**  
**Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Install Cable**

Offsite										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Bucket Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>335.18</b>	<b>0.02</b>	<b>0.01</b>	<b>339.00</b>
<b>Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>335.18</b>	<b>0.02</b>	<b>0.01</b>	<b>339.00</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.35</b>	<b>0.00</b>	<b>0.00</b>	<b>3.39</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.35</b>	<b>0.00</b>	<b>0.00</b>	<b>3.39</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	20	1.311	0.131	1.97	0.20	0.02	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	0	20	0.003	0.001	0.00	0.00	0.00	0.00
Bucket Truck	2	Unpaved	1.5	20	2.273	0.227	6.82	0.68	0.07	0.01
Bucket Truck	2	Paved	0	20	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	8	Paved	56.5	20	0.003	0.001	1.51	0.37	0.02	0.00
Worker Commute	8	Unpaved	1.5	20	1.102	0.110	13.22	1.32	0.00	0.00
<b>Offsite Total</b>							<b>23.51</b>	<b>2.57</b>	<b>0.10</b>	<b>0.01</b>
<b>Total</b>							<b>23.51</b>	<b>2.57</b>	<b>0.10</b>	<b>0.01</b>

<sup>a</sup> From Table 112

**Table 90**  
**Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Install Cable**

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 91**  
**Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	165.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	11.29	1.24	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>11.32</b>	<b>1.24</b>	<b>165.8</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>11.32</b>	<b>1.24</b>	<b>165.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table 91  
Telecommunications Construction Emissions  
220 kV/500 kV Towers to Desert View Substation - Splice Fiber Optic Cable**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	4	N/A	1.5
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	2.25	0.00	0.00	2.27

**Table 91**  
**Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Splice Fiber Optic Cable**

Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	1.5	4	1.311	0.131	3.93	0.39	0.01	0.00
Splicing Lab	2	Paved	0	4	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	4	Paved	56.5	4	0.003	0.001	0.75	0.18	0.00	0.00
Worker Commute	4	Unpaved	1.5	4	1.102	0.110	6.61	0.66	0.00	0.00
<b>Offsite Total</b>							<b>11.29</b>	<b>1.24</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>11.29</b>	<b>1.24</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**



**Table 91**  
**Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Splice Fiber Optic Cable**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 92**  
**Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.99	0.30	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>2.20</b>	<b>0.49</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.68	1.45	0.01	0.07	0.02	485.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	19.89	2.16	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>19.96</b>	<b>2.19</b>	<b>485.8</b>
<b>Total</b>	<b>0.90</b>	<b>4.50</b>	<b>7.78</b>	<b>0.02</b>	<b>22.16</b>	<b>2.68</b>	<b>1871.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	9.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>9.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>2.6</b>
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.05</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>11.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	13	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 92**  
**Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Underground Conduit and Structures**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.01	0.02	0.04	0.00	0.00	0.00	8.92	0.00	0.00	9.0
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.92</b>	<b>0.00</b>	<b>0.00</b>	<b>9.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	13	N/A	1.5
1-Ton Crew Cab Flatbed, 4x4	1	13	N/A	1.5
Water Truck	1	13	N/A	18
Concrete Truck	1	8	N/A	60
Worker Commute	5	13	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41

**Table 92**  
**Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Underground Conduit and Structures**

Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>480.53</b>	<b>0.01</b>	<b>0.02</b>	<b>485.82</b>
<b>Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>480.53</b>	<b>0.01</b>	<b>0.02</b>	<b>485.82</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.42
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.86
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.31	0.00	0.00	1.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.59</b>	<b>0.00</b>	<b>0.00</b>	<b>2.62</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.59</b>	<b>0.00</b>	<b>0.00</b>	<b>2.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	1.5	13	1.102	0.110	1.65	0.17	0.01	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	0	13	0.003	0.001	0.00	0.00	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	13	1.311	0.131	1.97	0.20	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	0	13	0.003	0.001	0.00	0.00	0.00	0.00
Water Truck	1	Unpaved	1.5	13	2.273	0.227	3.41	0.34	0.02	0.00
Water Truck	1	Paved	16.5	13	0.003	0.001	0.05	0.01	0.00	0.00
Concrete Truck	1	Unpaved	1.5	8	2.273	0.227	3.41	0.34	0.01	0.00
Concrete Truck	1	Paved	58.5	8	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	56.5	13	0.003	0.001	0.94	0.23	0.01	0.00
Worker Commute	5	Unpaved	1.5	13	1.102	0.110	8.26	0.83	0.00	0.00
<b>Offsite Total</b>							<b>19.89</b>	<b>2.16</b>	<b>0.07</b>	<b>0.01</b>
<b>Total</b>							<b>19.89</b>	<b>2.16</b>	<b>0.07</b>	<b>0.01</b>

<sup>a</sup> From Table 112

**Table 92**  
**Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Underground Conduit and Structures**

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	30	389	6.65E-02	1.01E-02	1.99	0.30	0.01	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.99</b>	<b>0.30</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 3,500 ft. long x 1 ft. wide x 3 ft. deep over 13 days

**Table 93**  
**Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install 5 Foot Crossarm**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.76	3.28	8.86	0.02	0.26	0.24	1,716.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.76</b>	<b>3.28</b>	<b>8.86</b>	<b>0.02</b>	<b>0.26</b>	<b>0.24</b>	<b>1716.4</b>
Offsite Motor Vehicle Exhaust	0.09	2.40	0.63	0.00	0.06	0.01	414.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	60.19	6.24	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.40</b>	<b>0.63</b>	<b>0.00</b>	<b>60.25</b>	<b>6.25</b>	<b>414.2</b>
<b>Total</b>	<b>0.85</b>	<b>5.67</b>	<b>9.49</b>	<b>0.02</b>	<b>60.51</b>	<b>6.49</b>	<b>2130.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.04	0.12	0.00	0.00	0.00	22.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.04</b>	<b>0.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.03	0.01	0.00	0.00	0.00	5.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.32	0.04	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.32</b>	<b>0.04</b>	<b>5.4</b>
<b>Total</b>	<b>0.01</b>	<b>0.07</b>	<b>0.12</b>	<b>0.00</b>	<b>0.33</b>	<b>0.04</b>	<b>27.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	26	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	0.76	3.28	8.86	0.02	0.26	0.24	1701.32	0.07	0.04	1,716.4

**Table 93**  
**Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install 5 Foot Crossarm**

<b>Total</b>	<b>0.76</b>	<b>3.28</b>	<b>8.86</b>	<b>0.02</b>	<b>0.26</b>	<b>0.24</b>	<b>1701.32</b>	<b>0.07</b>	<b>0.04</b>	<b>1716.44</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.01	0.04	0.12	0.00	0.00	0.00	22.12	0.00	0.00	22.3
<b>Total</b>	<b>0.01</b>	<b>0.04</b>	<b>0.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.12</b>	<b>0.00</b>	<b>0.00</b>	<b>22.31</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	26	N/A	11
Bucket Truck	2	26	N/A	11
Worker Commute	8	26	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 93**  
**Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install 5 Foot Crossarm**

Offsite										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
Bucket Truck	0.01	0.06	0.36	0.00	0.01	0.01	77.89	0.00	0.00	78.72
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.09</b>	<b>2.40</b>	<b>0.63</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>409.56</b>	<b>0.02</b>	<b>0.01</b>	<b>414.18</b>
<b>Total</b>	<b>0.09</b>	<b>2.40</b>	<b>0.63</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>409.56</b>	<b>0.02</b>	<b>0.01</b>	<b>414.18</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.01	0.00	0.00	1.02
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	4.20	0.00	0.00	4.25
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.32</b>	<b>0.00</b>	<b>0.00</b>	<b>5.38</b>
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.32</b>	<b>0.00</b>	<b>0.00</b>	<b>5.38</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	26	1.311	0.131	5.24	0.52	0.07	0.01
1-Ton Crew Cab Flatbed, 4x4	1	Paved	7	26	0.003	0.001	0.02	0.01	0.00	0.00
Bucket Truck	2	Unpaved	4	26	2.273	0.227	18.18	1.82	0.24	0.02
Bucket Truck	2	Paved	7	26	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	8	Paved	54	26	0.003	0.001	1.44	0.35	0.02	0.00
Worker Commute	8	Unpaved	4	26	1.102	0.110	35.25	3.53	0.00	0.00
<b>Offsite Total</b>							<b>60.19</b>	<b>6.24</b>	<b>0.32</b>	<b>0.04</b>
<b>Total</b>							<b>60.19</b>	<b>6.24</b>	<b>0.32</b>	<b>0.04</b>

<sup>a</sup> From Table 112



**Table 93  
Telecommunications Construction Emissions  
Apple Valley to Desert View Substation - Install 5 Foot Crossarm**

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 94**  
**Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install Down Guys**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.38	1.64	4.43	0.01	0.13	0.12	858.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.38</b>	<b>1.64</b>	<b>4.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.12</b>	<b>858.2</b>
Offsite Motor Vehicle Exhaust	0.09	2.37	0.45	0.00	0.06	0.01	374.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	51.07	5.32	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.37</b>	<b>0.45</b>	<b>0.00</b>	<b>51.13</b>	<b>5.33</b>	<b>374.8</b>
<b>Total</b>	<b>0.47</b>	<b>4.00</b>	<b>4.88</b>	<b>0.01</b>	<b>51.26</b>	<b>5.45</b>	<b>1233.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	3.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.4</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.06	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>1.5</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>4.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	1	8	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	0.38	1.64	4.43	0.01	0.13	0.12	850.66	0.03	0.02	858.2

**Table 94  
Telecommunications Construction Emissions  
Apple Valley to Desert View Substation - Install Down Guys**

<b>Total</b>	<b>0.38</b>	<b>1.64</b>	<b>4.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.12</b>	<b>850.66</b>	<b>0.03</b>	<b>0.02</b>	<b>858.22</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	---------------	-------------	-------------	---------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.00	0.01	0.02	0.00	0.00	0.00	3.40	0.00	0.00	3.4
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.40</b>	<b>0.00</b>	<b>0.00</b>	<b>3.43</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	8	N/A	11
Bucket Truck	1	8	N/A	11
Worker Commute	8	8	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 94  
Telecommunications Construction Emissions  
Apple Valley to Desert View Substation - Install Down Guys**

Offsite										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
Bucket Truck	0.00	0.03	0.18	0.00	0.01	0.00	38.94	0.00	0.00	39.36
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.09</b>	<b>2.37</b>	<b>0.45</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>370.61</b>	<b>0.02</b>	<b>0.01</b>	<b>374.82</b>
<b>Total</b>	<b>0.09</b>	<b>2.37</b>	<b>0.45</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>370.61</b>	<b>0.02</b>	<b>0.01</b>	<b>374.82</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.29	0.00	0.00	1.31
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.48</b>	<b>0.00</b>	<b>0.00</b>	<b>1.50</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.48</b>	<b>0.00</b>	<b>0.00</b>	<b>1.50</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	8	1.311	0.131	5.24	0.52	0.02	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	7	8	0.003	0.001	0.02	0.01	0.00	0.00
Bucket Truck	1	Unpaved	4	8	2.273	0.227	9.09	0.91	0.04	0.00
Bucket Truck	1	Paved	7	8	0.003	0.001	0.02	0.01	0.00	0.00
Worker Commute	8	Paved	54	8	0.003	0.001	1.44	0.35	0.01	0.00
Worker Commute	8	Unpaved	4	8	1.102	0.110	35.25	3.53	0.00	0.00
<b>Offsite Total</b>							<b>51.07</b>	<b>5.32</b>	<b>0.06</b>	<b>0.01</b>
<b>Total</b>							<b>51.07</b>	<b>5.32</b>	<b>0.06</b>	<b>0.01</b>

<sup>a</sup> From Table 112

**Table 94**  
**Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install Down Guys**

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 95  
Telecommunications Construction Emissions  
Apple Valley to Desert View Substation - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.05	1.23	0.50	0.00	0.04	0.01	250.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	41.84	4.30	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.23</b>	<b>0.50</b>	<b>0.00</b>	<b>41.88</b>	<b>4.31</b>	<b>250.6</b>
<b>Total</b>	<b>1.57</b>	<b>7.79</b>	<b>18.21</b>	<b>0.04</b>	<b>42.41</b>	<b>4.79</b>	<b>3683.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.03	0.11	0.31	0.00	0.01	0.01	60.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.03</b>	<b>0.11</b>	<b>0.31</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>60.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	4.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.42	0.04	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.42</b>	<b>0.04</b>	<b>4.4</b>
<b>Total</b>	<b>0.03</b>	<b>0.14</b>	<b>0.32</b>	<b>0.00</b>	<b>0.43</b>	<b>0.05</b>	<b>64.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	35	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9

**Table 95  
Telecommunications Construction Emissions  
Apple Valley to Desert View Substation - Install Cable**

<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>
--------------	-------------	-------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.03	0.11	0.31	0.00	0.01	0.01	59.55	0.00	0.00	60.1
<b>Total</b>	<b>0.03</b>	<b>0.11</b>	<b>0.31</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>59.55</b>	<b>0.00</b>	<b>0.00</b>	<b>60.08</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	35	N/A	11
Bucket Truck	2	35	N/A	11
Worker Commute	4	35	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 95  
Telecommunications Construction Emissions  
Apple Valley to Desert View Substation - Install Cable**

Offsite										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
Bucket Truck	0.01	0.06	0.36	0.00	0.01	0.01	77.89	0.00	0.00	78.72
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.05</b>	<b>1.23</b>	<b>0.50</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>247.84</b>	<b>0.01</b>	<b>0.01</b>	<b>250.62</b>
<b>Total</b>	<b>0.05</b>	<b>1.23</b>	<b>0.50</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>247.84</b>	<b>0.01</b>	<b>0.01</b>	<b>250.62</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.15
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.36	0.00	0.00	1.38
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.83	0.00	0.00	2.86
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.34</b>	<b>0.00</b>	<b>0.00</b>	<b>4.39</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.34</b>	<b>0.00</b>	<b>0.00</b>	<b>4.39</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	35	1.311	0.131	5.24	0.52	0.09	0.01
1-Ton Crew Cab Flatbed, 4x4	1	Paved	7	35	0.003	0.001	0.02	0.01	0.00	0.00
Bucket Truck	2	Unpaved	4	35	2.273	0.227	18.18	1.82	0.32	0.03
Bucket Truck	2	Paved	7	35	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	4	Paved	54	35	0.003	0.001	0.72	0.18	0.01	0.00
Worker Commute	4	Unpaved	4	35	1.102	0.110	17.63	1.76	0.00	0.00
<b>Offsite Total</b>							<b>41.84</b>	<b>4.30</b>	<b>0.42</b>	<b>0.04</b>
<b>Total</b>							<b>41.84</b>	<b>4.30</b>	<b>0.42</b>	<b>0.04</b>

<sup>a</sup> From Table 112



**Table 95  
Telecommunications Construction Emissions  
Apple Valley to Desert View Substation - Install Cable**

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 96**  
**Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.15	0.00	0.03	0.00	180.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	28.88	3.00	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>28.90</b>	<b>3.00</b>	<b>180.2</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>28.90</b>	<b>3.00</b>	<b>180.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.04	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>0.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>0.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table 96  
Telecommunications Construction Emissions  
Apple Valley to Desert View Substation - Splice Fiber Optic Cable**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	8	N/A	11
Worker Commute	4	8	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.01	0.02	0.00	0.00	0.00	16.47	0.00	0.00	16.67

**Table 96  
Telecommunications Construction Emissions  
Apple Valley to Desert View Substation - Splice Fiber Optic Cable**

Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>178.19</b>	<b>0.01</b>	<b>0.01</b>	<b>180.23</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>178.19</b>	<b>0.01</b>	<b>0.01</b>	<b>180.23</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.65
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.72</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	4	8	1.311	0.131	10.48	1.05	0.04	0.00
Splicing Lab	2	Paved	7	8	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	4	Paved	54	8	0.003	0.001	0.72	0.18	0.00	0.00
Worker Commute	4	Unpaved	4	8	1.102	0.110	17.63	1.76	0.00	0.00
<b>Offsite Total</b>							<b>28.88</b>	<b>3.00</b>	<b>0.04</b>	<b>0.00</b>
<b>Total</b>							<b>28.88</b>	<b>3.00</b>	<b>0.04</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 96**  
**Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Splice Fiber Optic Cable**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 97  
Telecommunications Construction Emissions  
Apple Valley to Desert View Substation - Underground Conduit from Pole to Pole**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.33	0.20	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>1.54</b>	<b>0.39</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.09	1.69	1.48	0.01	0.08	0.03	500.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	31.64	3.34	
<b>Offsite Total</b>	<b>0.09</b>	<b>1.69</b>	<b>1.48</b>	<b>0.01</b>	<b>31.72</b>	<b>3.37</b>	<b>500.2</b>
<b>Total</b>	<b>0.90</b>	<b>4.51</b>	<b>7.80</b>	<b>0.02</b>	<b>33.25</b>	<b>3.76</b>	<b>1885.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	6.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>6.2</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>2.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.11</b>	<b>0.01</b>	<b>8.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	9	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 97**  
**Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Underground Conduit from Pole to Pole**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.01	0.03	0.00	0.00	0.00	6.18	0.00	0.00	6.2
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.18</b>	<b>0.00</b>	<b>0.00</b>	<b>6.23</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	9	N/A	11
1-Ton Crew Cab Flatbed, 4x4	1	9	N/A	11
Water Truck	1	9	N/A	18
Concrete Truck	1	6	N/A	60
Worker Commute	5	13	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41

**Table 97**  
**Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Underground Conduit from Pole to Pole**

Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.09</b>	<b>1.69</b>	<b>1.48</b>	<b>0.01</b>	<b>0.08</b>	<b>0.03</b>	<b>494.76</b>	<b>0.01</b>	<b>0.02</b>	<b>500.21</b>
<b>Total</b>	<b>0.09</b>	<b>1.69</b>	<b>1.48</b>	<b>0.01</b>	<b>0.08</b>	<b>0.03</b>	<b>494.76</b>	<b>0.01</b>	<b>0.02</b>	<b>500.21</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.29
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.31	0.00	0.00	1.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.31</b>	<b>0.00</b>	<b>0.00</b>	<b>2.34</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.31</b>	<b>0.00</b>	<b>0.00</b>	<b>2.34</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	4	9	1.102	0.110	4.41	0.44	0.02	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	7	9	0.003	0.001	0.02	0.01	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	9	1.311	0.131	5.24	0.52	0.02	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	7	9	0.003	0.001	0.02	0.01	0.00	0.00
Water Truck	1	Unpaved	4	9	2.273	0.227	9.09	0.91	0.04	0.00
Water Truck	1	Paved	14	9	0.003	0.001	0.05	0.01	0.00	0.00
Concrete Truck	1	Unpaved	1.5	6	2.273	0.227	3.41	0.34	0.01	0.00
Concrete Truck	1	Paved	58.5	6	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	56.5	13	0.003	0.001	0.94	0.23	0.01	0.00
Worker Commute	5	Unpaved	1.5	13	1.102	0.110	8.26	0.83	0.00	0.00
<b>Offsite Total</b>							<b>31.64</b>	<b>3.34</b>	<b>0.10</b>	<b>0.01</b>
<b>Total</b>							<b>31.64</b>	<b>3.34</b>	<b>0.10</b>	<b>0.01</b>

<sup>a</sup> From Table 112



**Table 97  
Telecommunications Construction Emissions  
Apple Valley to Desert View Substation - Underground Conduit from Pole to Pole**

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	20	178	6.65E-02	1.01E-02	1.33	0.20	0.01	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.33</b>	<b>0.20</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 1,600 ft. long x 1 ft. wide x 3 ft. deep over 9 days

**Table 98**  
**Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Restoration**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.08	2.10	0.55	0.00	0.05	0.01	367.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	32.55	3.46	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.10</b>	<b>0.55</b>	<b>0.00</b>	<b>32.61</b>	<b>3.47</b>	<b>367.3</b>
<b>Total</b>	<b>0.08</b>	<b>2.10</b>	<b>0.55</b>	<b>0.00</b>	<b>32.61</b>	<b>3.47</b>	<b>367.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	2.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.12	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>2.0</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>2.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None	200	1	9	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.08	2.10	0.55	0.00	32.61	3.47	367.3			

**Table 98  
Telecommunications Construction Emissions  
Apple Valley to Desert View Substation - Restoration**

None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab, 4x4	2	11	N/A	11
Water Truck	1	11	N/A	18
Worker Commute	7	11	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										

**Table 98**  
**Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Restoration**

None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	16.47	0.00	0.00	16.67
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Worker Commute	0.07	2.04	0.22	0.00	0.04	0.00	283.01	0.02	0.01	286.24
<b>Offsite Total</b>	<b>0.08</b>	<b>2.10</b>	<b>0.55</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>363.20</b>	<b>0.02</b>	<b>0.01</b>	<b>367.31</b>
<b>Total</b>	<b>0.08</b>	<b>2.10</b>	<b>0.55</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>363.20</b>	<b>0.02</b>	<b>0.01</b>	<b>367.31</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.35
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.56	0.00	0.00	1.57
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.02</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.02</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	2	Unpaved	4	11	1.311	0.131	10.48	1.05	0.06	0.01
1-Ton Crew Cab, 4x4	2	Paved	7	11	0.003	0.001	0.05	0.01	0.00	0.00
Water Truck	1	Unpaved	4	11	2.273	0.227	9.09	0.91	0.05	0.01
Water Truck	1	Paved	14	11	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	7	Paved	56.5	11	0.003	0.001	1.32	0.32	0.01	0.00
Worker Commute	7	Unpaved	1.5	11	1.102	0.110	11.57	1.16	0.00	0.00

**Table 98  
Telecommunications Construction Emissions  
Apple Valley to Desert View Substation - Restoration**

<b>Offsite Total</b>							<b>32.55</b>	<b>3.46</b>	<b>0.12</b>	<b>0.01</b>
<b>Total</b>							<b>32.55</b>	<b>3.46</b>	<b>0.12</b>	<b>0.01</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 99**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install 5 Foot Crossarm**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.11	2.51	1.25	0.01	0.08	0.02	556.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.83	0.45	
<b>Offsite Total</b>	<b>0.11</b>	<b>2.51</b>	<b>1.25</b>	<b>0.01</b>	<b>1.92</b>	<b>0.47</b>	<b>556.6</b>
<b>Total</b>	<b>1.63</b>	<b>9.06</b>	<b>18.96</b>	<b>0.04</b>	<b>2.44</b>	<b>0.96</b>	<b>3989.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.07	0.18	0.00	0.01	0.00	34.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.18</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.03	0.01	0.00	0.00	0.00	5.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>5.6</b>
<b>Total</b>	<b>0.02</b>	<b>0.09</b>	<b>0.19</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>39.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	20	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9

**Table 99**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install 5 Foot Crossarm**

<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>
--------------	-------------	-------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.07	0.18	0.00	0.01	0.00	34.03	0.00	0.00	34.3
<b>Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.18</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.03</b>	<b>0.00</b>	<b>0.00</b>	<b>34.33</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	20	N/A	29
Bucket Truck	2	20	N/A	29
Worker Commute	8	20	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 99**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install 5 Foot Crossarm**

Offsite										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
Bucket Truck	0.02	0.17	0.96	0.00	0.03	0.02	205.33	0.00	0.01	207.53
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.11</b>	<b>2.51</b>	<b>1.25</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>550.49</b>	<b>0.02</b>	<b>0.02</b>	<b>556.63</b>
<b>Total</b>	<b>0.11</b>	<b>2.51</b>	<b>1.25</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>550.49</b>	<b>0.02</b>	<b>0.02</b>	<b>556.63</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.22
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.05	0.00	0.00	2.08
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.50</b>	<b>0.00</b>	<b>0.00</b>	<b>5.57</b>
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.50</b>	<b>0.00</b>	<b>0.00</b>	<b>5.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Paved	29	20	0.003	0.001	0.10	0.02	0.00	0.00
Bucket Truck	2	Paved	29	20	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	8	Paved	58	20	0.003	0.001	1.54	0.38	0.02	0.00
<b>Offsite Total</b>							<b>1.83</b>	<b>0.45</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>1.83</b>	<b>0.45</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]



**Table 99**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install 5 Foot Crossarm**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 100**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Replacement Wood Pole Haul/Install**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.40	14.50	31.28	0.07	0.98	0.91	7,395.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.40</b>	<b>14.50</b>	<b>31.28</b>	<b>0.07</b>	<b>0.98</b>	<b>0.91</b>	<b>7395.8</b>
Offsite Motor Vehicle Exhaust	0.14	2.69	2.27	0.01	0.12	0.04	808.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2.22	0.55	
<b>Offsite Total</b>	<b>0.14</b>	<b>2.69</b>	<b>2.27</b>	<b>0.01</b>	<b>2.34</b>	<b>0.59</b>	<b>808.1</b>
<b>Total</b>	<b>3.54</b>	<b>17.19</b>	<b>33.55</b>	<b>0.08</b>	<b>3.33</b>	<b>1.49</b>	<b>8203.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.07	0.16	0.00	0.00	0.00	37.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>37.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	4.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>4.0</b>
<b>Total</b>	<b>0.02</b>	<b>0.09</b>	<b>0.17</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>41.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30-Ton Crane	300	1	10	8
Bucket Truck	300	2	10	8
60' Digger Derrick	300	1	10	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30-Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
60' Digger Derrick	300	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

<sup>a</sup> From Table 111

**Table 100**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Replacement Wood Pole Haul/Install**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30-Ton Crane	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
60' Digger Derrick	0.83	4.40	5.00	0.02	0.15	0.14	2488.23	0.07	0.06	2,509.8
<b>Total</b>	<b>3.40</b>	<b>14.50</b>	<b>31.28</b>	<b>0.07</b>	<b>0.98</b>	<b>0.91</b>	<b>7330.39</b>	<b>0.31</b>	<b>0.19</b>	<b>7395.78</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30-Ton Crane	0.01	0.02	0.04	0.00	0.00	0.00	7.20	0.00	0.00	7.3
Bucket Truck	0.01	0.03	0.09	0.00	0.00	0.00	17.01	0.00	0.00	17.2
60' Digger Derrick	0.00	0.02	0.02	0.00	0.00	0.00	12.44	0.00	0.00	12.5
<b>Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>36.65</b>	<b>0.00</b>	<b>0.00</b>	<b>36.98</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	2	10	N/A	29
1-Ton Crew Cab Flatbed, 4x4	1	10	N/A	29
Bucket Truck	2	10	N/A	29
Flat Bed Truck w/Derrick	1	10	N/A	29
40-Foot Flat Bed Truck/Trailer	1	10	N/A	29
Worker Commute	8	10	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										

**Table 100**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Replacement Wood Pole Haul/Install**

3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck w/Derrick	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
40-Foot Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	43.43	0.00	0.00	43.95
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
Bucket Truck	0.02	0.17	0.96	0.00	0.03	0.02	205.33	0.00	0.01	207.53
Flat Bed Truck w/Derrick	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
40-Foot Flat Bed Truck/Trailer	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.14</b>	<b>2.69</b>	<b>2.27</b>	<b>0.01</b>	<b>0.12</b>	<b>0.04</b>	<b>799.25</b>	<b>0.02</b>	<b>0.03</b>	<b>808.11</b>
<b>Total</b>	<b>0.14</b>	<b>2.69</b>	<b>2.27</b>	<b>0.01</b>	<b>0.12</b>	<b>0.04</b>	<b>799.25</b>	<b>0.02</b>	<b>0.03</b>	<b>808.11</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.22
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.03	0.00	0.00	1.04
Flat Bed Truck w/Derrick	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.52
40-Foot Flat Bed Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.52
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.62	0.00	0.00	1.64
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.04</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.04</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 100**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Replacement Wood Pole Haul/Install**

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	2	Paved	29	10	0.003	0.001	0.19	0.05	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	29	10	0.003	0.001	0.10	0.02	0.00	0.00
Bucket Truck	2	Paved	29	10	0.003	0.001	0.19	0.05	0.00	0.00
Flat Bed Truck w/Derrick	1	Paved	29	10	0.003	0.001	0.10	0.02	0.00	0.00
40-Foot Flat Bed Truck/Trailer	1	Paved	29	10	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	8	Paved	58	10	0.003	0.001	1.54	0.38	0.01	0.00
<b>Offsite Total</b>							<b>2.22</b>	<b>0.55</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>2.22</b>	<b>0.55</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 101**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Down Guys**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.38	1.64	4.43	0.01	0.13	0.12	858.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.38</b>	<b>1.64</b>	<b>4.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.12</b>	<b>858.2</b>
Offsite Motor Vehicle Exhaust	0.10	2.42	0.77	0.01	0.07	0.01	452.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.74	0.43	
<b>Offsite Total</b>	<b>0.10</b>	<b>2.42</b>	<b>0.77</b>	<b>0.01</b>	<b>1.81</b>	<b>0.44</b>	<b>452.9</b>
<b>Total</b>	<b>0.47</b>	<b>4.06</b>	<b>5.19</b>	<b>0.01</b>	<b>1.94</b>	<b>0.56</b>	<b>1311.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.01	0.00	0.00	0.00	2.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.6</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>1.4</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>3.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	1	6	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	0.38	1.64	4.43	0.01	0.13	0.12	850.66	0.03	0.02	858.2

**Table 101  
Telecommunications Construction Emissions  
Gale to Pisgah Fiber Optic Cable - Install Down Guys**

<b>Total</b>	<b>0.38</b>	<b>1.64</b>	<b>4.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.12</b>	<b>850.66</b>	<b>0.03</b>	<b>0.02</b>	<b>858.22</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	---------------	-------------	-------------	---------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.55	0.00	0.00	2.6
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.55</b>	<b>0.00</b>	<b>0.00</b>	<b>2.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	6	N/A	29
Bucket Truck	1	6	N/A	29
Worker Commute	8	6	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 101  
Telecommunications Construction Emissions  
Gale to Pisgah Fiber Optic Cable - Install Down Guys**

Offsite										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
Bucket Truck	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.10</b>	<b>2.42</b>	<b>0.77</b>	<b>0.01</b>	<b>0.07</b>	<b>0.01</b>	<b>447.82</b>	<b>0.02</b>	<b>0.01</b>	<b>452.87</b>
<b>Total</b>	<b>0.10</b>	<b>2.42</b>	<b>0.77</b>	<b>0.01</b>	<b>0.07</b>	<b>0.01</b>	<b>447.82</b>	<b>0.02</b>	<b>0.01</b>	<b>452.87</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.31
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	0.97	0.00	0.00	0.98
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.34</b>	<b>0.00</b>	<b>0.00</b>	<b>1.36</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.34</b>	<b>0.00</b>	<b>0.00</b>	<b>1.36</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Paved	29	6	0.003	0.001	0.10	0.02	0.00	0.00
Bucket Truck	1	Paved	29	6	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	8	Paved	58	6	0.003	0.001	1.54	0.38	0.00	0.00
<b>Offsite Total</b>							<b>1.74</b>	<b>0.43</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>1.74</b>	<b>0.43</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]



**Table 101**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Down Guys**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 102**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.11	2.52	1.28	0.01	0.09	0.02	578.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.93	0.47	
<b>Offsite Total</b>	<b>0.11</b>	<b>2.52</b>	<b>1.28</b>	<b>0.01</b>	<b>2.02</b>	<b>0.50</b>	<b>578.6</b>
<b>Total</b>	<b>1.63</b>	<b>9.07</b>	<b>18.99</b>	<b>0.04</b>	<b>2.55</b>	<b>0.98</b>	<b>4011.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.06	0.16	0.00	0.00	0.00	30.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>30.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	5.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>5.2</b>
<b>Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.17</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>36.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	18	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9

**Table 102**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Cable**

<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>
--------------	-------------	-------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.01	0.06	0.16	0.00	0.00	0.00	30.62	0.00	0.00	30.9
<b>Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>30.62</b>	<b>0.00</b>	<b>0.00</b>	<b>30.90</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	2	18	N/A	29
Bucket Truck	2	18	N/A	29
Worker Commute	8	18	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 102**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Cable**

Offsite										
3/4-Ton Pick-up Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	43.43	0.00	0.00	43.95
Bucket Truck	0.02	0.17	0.96	0.00	0.03	0.02	205.33	0.00	0.01	207.53
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.11</b>	<b>2.52</b>	<b>1.28</b>	<b>0.01</b>	<b>0.09</b>	<b>0.02</b>	<b>572.20</b>	<b>0.02</b>	<b>0.02</b>	<b>578.60</b>
<b>Total</b>	<b>0.11</b>	<b>2.52</b>	<b>1.28</b>	<b>0.01</b>	<b>0.09</b>	<b>0.02</b>	<b>572.20</b>	<b>0.02</b>	<b>0.02</b>	<b>578.60</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.40
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.85	0.00	0.00	1.87
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.91	0.00	0.00	2.94
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.15</b>	<b>0.00</b>	<b>0.00</b>	<b>5.21</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.15</b>	<b>0.00</b>	<b>0.00</b>	<b>5.21</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	2	Paved	29	18	0.003	0.001	0.19	0.05	0.00	0.00
Bucket Truck	2	Paved	29	18	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	8	Paved	58	18	0.003	0.001	1.54	0.38	0.01	0.00
<b>Offsite Total</b>							<b>1.93</b>	<b>0.47</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>1.93</b>	<b>0.47</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 102**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Cable**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 103**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.19	0.19	0.00	0.03	0.00	207.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.97	0.24	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.19</b>	<b>0.19</b>	<b>0.00</b>	<b>1.00</b>	<b>0.24</b>	<b>207.5</b>
<b>Total</b>	<b>0.04</b>	<b>1.19</b>	<b>0.19</b>	<b>0.00</b>	<b>1.00</b>	<b>0.24</b>	<b>207.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.5</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table 103**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Splice Fiber Optic Cable**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	34	N/A	29
Worker Commute	4	34	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.02	0.06	0.00	0.01	0.00	43.43	0.00	0.00	43.95

**Table 103**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Splice Fiber Optic Cable**

Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.19</b>	<b>0.19</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>205.15</b>	<b>0.01</b>	<b>0.01</b>	<b>207.51</b>
<b>Total</b>	<b>0.04</b>	<b>1.19</b>	<b>0.19</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>205.15</b>	<b>0.01</b>	<b>0.01</b>	<b>207.51</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.75
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.75	0.00	0.00	2.78
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.49</b>	<b>0.00</b>	<b>0.00</b>	<b>3.53</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.49</b>	<b>0.00</b>	<b>0.00</b>	<b>3.53</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Paved	29	34	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	4	Paved	58	34	0.003	0.001	0.77	0.19	0.01	0.00
<b>Offsite Total</b>							<b>0.97</b>	<b>0.24</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>0.97</b>	<b>0.24</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
----------	----------------	----------------------	----------------------	---	--	----------------------------	-----------------------------	--------------------------	---------------------------



**Table 103**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Splice Fiber Optic Cable**

Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 104**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Underground Conduit & Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.33	0.20	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>1.54</b>	<b>0.39</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.64	1.18	0.00	0.07	0.02	455.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.35	0.33	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.64</b>	<b>1.18</b>	<b>0.00</b>	<b>1.42</b>	<b>0.35</b>	<b>455.9</b>
<b>Total</b>	<b>0.90</b>	<b>4.47</b>	<b>7.51</b>	<b>0.02</b>	<b>2.96</b>	<b>0.75</b>	<b>1841.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.04	0.08	0.00	0.00	0.00	17.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.04</b>	<b>0.08</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>17.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	5.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>5.2</b>
<b>Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.09</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>22.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	25	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 104**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Underground Conduit & Structures**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.01	0.04	0.08	0.00	0.00	0.00	17.16	0.00	0.00	17.3
<b>Total</b>	<b>0.01</b>	<b>0.04</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.16</b>	<b>0.00</b>	<b>0.00</b>	<b>17.32</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	25	N/A	29
1-Ton Crew Cab Flatbed, 4x4	1	25	N/A	29
Water Truck	1	25	N/A	29
Concrete Truck	1	16	N/A	29
Worker Commute	5	25	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
Water Truck	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76

**Table 104**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Underground Conduit & Structures**

Concrete Truck	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.08</b>	<b>1.64</b>	<b>1.18</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>450.91</b>	<b>0.01</b>	<b>0.02</b>	<b>455.93</b>
<b>Total</b>	<b>0.08</b>	<b>1.64</b>	<b>1.18</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>450.91</b>	<b>0.01</b>	<b>0.02</b>	<b>455.93</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.28	0.00	0.00	1.30
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.83
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.53	0.00	0.00	2.56
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.17</b>	<b>0.00</b>	<b>0.00</b>	<b>5.23</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.17</b>	<b>0.00</b>	<b>0.00</b>	<b>5.23</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Paved	29	25	0.003	0.001	0.10	0.02	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	29	25	0.003	0.001	0.10	0.02	0.00	0.00
Water Truck	1	Paved	29	25	0.003	0.001	0.10	0.02	0.00	0.00
Concrete Truck	1	Paved	29	16	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	5	Paved	58	25	0.003	0.001	0.97	0.24	0.01	0.00
<b>Offsite Total</b>							<b>1.35</b>	<b>0.33</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>1.35</b>	<b>0.33</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 104**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Underground Conduit & Structures**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	20	178	6.65E-02	1.01E-02	1.33	0.20	0.01	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.33</b>	<b>0.20</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 1,600 ft. long x 1 ft. wide x 3 ft. deep over 9 days

**Table 105**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Restoration**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.09	2.14	0.77	0.00	0.07	0.01	433.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.64	0.40	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.14</b>	<b>0.77</b>	<b>0.00</b>	<b>1.71</b>	<b>0.42</b>	<b>433.9</b>
<b>Total</b>	<b>0.09</b>	<b>2.14</b>	<b>0.77</b>	<b>0.00</b>	<b>1.71</b>	<b>0.42</b>	<b>433.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	3.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>3.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>3.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None	200	1	9	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.09	2.14	0.77	0.00	1.71	0.42	433.9			

**Table 105**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Restoration**

None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab, 4x4	2	17	N/A	29
Water Truck	1	17	N/A	29
Worker Commute	7	17	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										

**Table 105**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Restoration**

None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	43.43	0.00	0.00	43.95
Water Truck	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
Worker Commute	0.07	2.04	0.22	0.00	0.04	0.00	283.01	0.02	0.01	286.24
<b>Offsite Total</b>	<b>0.09</b>	<b>2.14</b>	<b>0.77</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>429.11</b>	<b>0.02</b>	<b>0.01</b>	<b>433.95</b>
<b>Total</b>	<b>0.09</b>	<b>2.14</b>	<b>0.77</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>429.11</b>	<b>0.02</b>	<b>0.01</b>	<b>433.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.37
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.00	0.88
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.41	0.00	0.00	2.43
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.65</b>	<b>0.00</b>	<b>0.00</b>	<b>3.69</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.65</b>	<b>0.00</b>	<b>0.00</b>	<b>3.69</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	2	Paved	29	17	0.003	0.001	0.19	0.05	0.00	0.00
Water Truck	1	Paved	29	17	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	7	Paved	58	17	0.003	0.001	1.35	0.33	0.01	0.00
<b>Offsite Total</b>							<b>1.64</b>	<b>0.40</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>1.64</b>	<b>0.40</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112



**Table 105**  
**Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Restoration**

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 106**  
**Telecommunications Construction Emissions**  
**Construct Coolwater Microwave Tower**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.79	14.31	27.06	0.08	0.94	0.86	7,144.5
Onsite Motor Vehicle Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	8.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.79</b>	<b>14.32</b>	<b>27.10</b>	<b>0.08</b>	<b>0.95</b>	<b>0.87</b>	<b>7152.8</b>
Offsite Motor Vehicle Exhaust	0.07	1.34	1.12	0.00	0.06	0.02	378.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.97	0.24	
<b>Offsite Total</b>	<b>0.07</b>	<b>1.34</b>	<b>1.12</b>	<b>0.00</b>	<b>1.03</b>	<b>0.26</b>	<b>378.2</b>
<b>Total</b>	<b>3.86</b>	<b>15.65</b>	<b>28.22</b>	<b>0.08</b>	<b>1.98</b>	<b>1.12</b>	<b>7531.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.05	0.09	0.00	0.00	0.00	23.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.5</b>
Offsite Motor Vehicle Exhaust	0.00	0.03	0.00	0.00	0.00	0.00	4.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>4.3</b>
<b>Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.09</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>27.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Crane	300	1	8	6
Drill Rig	350	1	7	6
Concrete Pump	350	1	2	6
Forklift	300	1	10	4
Backhoe/Front Loader	300	1	10	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Drill Rig	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Concrete Pump	350	0.157	0.667	1.801	0.003	0.054	0.050	344.895	0.014	0.009	Pumps
Forklift	300	0.069	0.215	0.451	0.001	0.016	0.015	110.880	0.006	0.003	Forklifts
Backhoe/Front Loader	300	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 111

**Table 106**  
**Telecommunications Construction Emissions**  
**Construct Coolwater Microwave Tower**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
Drill Rig	0.62	3.30	3.75	0.02	0.11	0.10	1866.17	0.06	0.05	1,882.3
Concrete Pump	1.19	4.17	8.44	0.02	0.30	0.27	2067.26	0.11	0.05	2,086.1
Forklift	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Backhoe/Front Loader	1.19	4.17	8.44	0.02	0.30	0.27	2067.26	0.11	0.05	2,086.1
<b>Total</b>	<b>3.79</b>	<b>14.31</b>	<b>27.06</b>	<b>0.08</b>	<b>0.94</b>	<b>0.86</b>	<b>7080.34</b>	<b>0.34</b>	<b>0.18</b>	<b>7144.48</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Crane	0.00	0.01	0.03	0.00	0.00	0.00	4.32	0.00	0.00	4.4
Drill Rig	0.00	0.01	0.01	0.00	0.00	0.00	6.53	0.00	0.00	6.6
Concrete Pump	0.00	0.00	0.01	0.00	0.00	0.00	2.07	0.00	0.00	2.1
Forklift	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Backhoe/Front Loader	0.01	0.02	0.04	0.00	0.00	0.00	10.34	0.00	0.00	10.4
<b>Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.25</b>	<b>0.00</b>	<b>0.00</b>	<b>23.46</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
3/4-Ton Pick-up Truck, 4x4	2	40	N/A	0.5
Flatbed Truck	2	7	N/A	0.5
Dump Truck	1	7	N/A	0.5
2 Ton Truck	1	15	N/A	0.5
Concrete Truck	1	2	N/A	0.5
<b>Offsite</b>				
Concrete Truck	1	2	N/A	60
Worker Commute	4	50	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Flatbed Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 106**  
**Telecommunications Construction Emissions**  
**Construct Coolwater Microwave Tower**

Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
2 Ton Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
<b>Offsite</b>										
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Flatbed Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Dump Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
2 Ton Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.20</b>	<b>0.00</b>	<b>0.00</b>	<b>8.29</b>
<b>Offsite</b>										
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.07</b>	<b>1.34</b>	<b>1.12</b>	<b>0.00</b>	<b>0.06</b>	<b>0.02</b>	<b>374.13</b>	<b>0.01</b>	<b>0.01</b>	<b>378.25</b>
<b>Total</b>	<b>0.07</b>	<b>1.34</b>	<b>1.16</b>	<b>0.00</b>	<b>0.06</b>	<b>0.02</b>	<b>382.34</b>	<b>0.01</b>	<b>0.01</b>	<b>386.54</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
Flatbed Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
2 Ton Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>
<b>Offsite</b>										
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	4.04	0.00	0.00	4.09
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.26</b>	<b>0.00</b>	<b>0.00</b>	<b>4.30</b>
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.29</b>	<b>0.00</b>	<b>0.00</b>	<b>4.34</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 106**  
**Telecommunications Construction Emissions**  
**Construct Coolwater Microwave Tower**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
3/4-Ton Pick-up Truck, 4x4	2	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
Flatbed Truck	2	Paved	0.5	7	0.003	0.001	0.00	0.00	0.00	0.00
Dump Truck	1	Paved	0.5	7	0.003	0.001	0.00	0.00	0.00	0.00
2 Ton Truck	1	Paved	0.5	15	0.003	0.001	0.00	0.00	0.00	0.00
Concrete Truck	1	Paved	0.5	2	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Concrete Truck	1	Paved	60	2	0.003	0.001	0.20	0.05	0.00	0.00
Worker Commute	4	Paved	58	50	0.003	0.001	0.77	0.19	0.02	0.00
<b>Offsite Total</b>							<b>0.97</b>	<b>0.24</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>0.98</b>	<b>0.24</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 107**  
**Distribution for Station Light & Power Construction Emissions**  
**Overhead Construction**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.58	7.68	13.85	0.04	0.41	0.38	4,226.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.58</b>	<b>7.68</b>	<b>13.85</b>	<b>0.04</b>	<b>0.41</b>	<b>0.38</b>	<b>4226.2</b>
Offsite Motor Vehicle Exhaust	0.05	1.46	0.19	0.00	0.03	0.00	211.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	14.60	1.60	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.46</b>	<b>0.19</b>	<b>0.00</b>	<b>14.63</b>	<b>1.60</b>	<b>211.0</b>
<b>Total</b>	<b>1.64</b>	<b>9.14</b>	<b>14.04</b>	<b>0.04</b>	<b>15.05</b>	<b>1.98</b>	<b>4437.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.02	0.04	0.00	0.00	0.00	12.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.04	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.04</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>13.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	1	6	8
60' Digger Derrick	350	1	6	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
60' Digger Derrick	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	0.76	3.28	8.86	0.02	0.26	0.24	1701.32	0.07	0.04	1,716.4
60' Digger Derrick	0.83	4.40	5.00	0.02	0.15	0.14	2488.23	0.07	0.06	2,509.8
<b>Total</b>	<b>1.58</b>	<b>7.68</b>	<b>13.85</b>	<b>0.04</b>	<b>0.41</b>	<b>0.38</b>	<b>4189.55</b>	<b>0.14</b>	<b>0.11</b>	<b>4226.22</b>

**Table 107**  
**Distribution for Station Light & Power Construction Emissions**  
**Overhead Construction**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.00	0.01	0.03	0.00	0.00	0.00	5.10	0.00	0.00	5.1
60' Digger Derrick	0.00	0.01	0.01	0.00	0.00	0.00	7.46	0.00	0.00	7.5
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.57</b>	<b>0.00</b>	<b>0.00</b>	<b>12.68</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	6	N/A	1.5
Flat Bed Truck w/Derrick	1	6	N/A	1.5
Worker Commute	5	6	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	MDV Diesel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Flat Bed Truck w/Derrick	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Flat Bed Truck w/Derrick	0.00	0.00	0.02	0.00	0.00	0.00	5.31	0.00	0.00	5.37
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45

**Table 107**  
**Distribution for Station Light & Power Construction Emissions**  
**Overhead Construction**

<b>Offsite Total</b>	<b>0.05</b>	<b>1.46</b>	<b>0.19</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>208.58</b>	<b>0.01</b>	<b>0.01</b>	<b>210.96</b>
<b>Total</b>	<b>0.05</b>	<b>1.46</b>	<b>0.19</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>208.58</b>	<b>0.01</b>	<b>0.01</b>	<b>210.96</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flat Bed Truck w/Derrick	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Paved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	6	1.311	0.131	1.97	0.20	0.01	0.00
Flat Bed Truck w/Derrick	1	Unpaved	1.5	6	2.273	0.227	3.41	0.34	0.01	0.00
Worker Commute	5	Unpaved	1.5	6	1.102	0.110	8.26	0.83	0.02	0.00
Worker Commute	5	Paved	58	6	0.003	0.001	0.97	0.24	0.00	0.00
<b>Offsite Total</b>							<b>14.60</b>	<b>1.60</b>	<b>0.04</b>	<b>0.00</b>
<b>Total</b>							<b>14.60</b>	<b>1.60</b>	<b>0.04</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00



**Table 107**  
**Distribution for Station Light & Power Construction Emissions**  
**Overhead Construction**

Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 108**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Civil Construction**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.58	9.46	19.58	0.05	0.68	0.62	4,831.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.58</b>	<b>9.46</b>	<b>19.58</b>	<b>0.05</b>	<b>0.68</b>	<b>0.62</b>	<b>4831.8</b>
Offsite Motor Vehicle Exhaust	0.10	1.80	2.15	0.01	0.10	0.04	635.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	18.40	2.04	
<b>Offsite Total</b>	<b>0.10</b>	<b>1.80</b>	<b>2.15</b>	<b>0.01</b>	<b>18.50</b>	<b>2.07</b>	<b>635.0</b>
<b>Total</b>	<b>2.68</b>	<b>11.26</b>	<b>21.73</b>	<b>0.06</b>	<b>19.17</b>	<b>2.70</b>	<b>5466.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	10.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.4</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>1.5</b>
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.05</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>11.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	300	1	6	8
Hydraulic Rewind Puller	300	1	2	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	300	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes
Hydraulic Rewind Puller	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	1.59	5.57	11.26	0.03	0.40	0.36	2756.35	0.14	0.07	2,781.5
Hydraulic Rewind Puller	0.99	3.89	8.32	0.02	0.28	0.26	2032.08	0.09	0.05	2,050.3
<b>Total</b>	<b>2.58</b>	<b>9.46</b>	<b>19.58</b>	<b>0.05</b>	<b>0.68</b>	<b>0.62</b>	<b>4788.43</b>	<b>0.23</b>	<b>0.12</b>	<b>4831.83</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

**Table 108**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Civil Construction**

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.02	0.03	0.00	0.00	0.00	8.27	0.00	0.00	8.3
Hydraulic Rewind Puller	0.00	0.00	0.01	0.00	0.00	0.00	2.03	0.00	0.00	2.1
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.30</b>	<b>0.00</b>	<b>0.00</b>	<b>10.39</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab, 4x4	1	6	N/A	1.5
Concrete Truck	1	6	N/A	60
Structure Delivery Truck	1	2	N/A	60
Worker Commute	5	6	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	MDV Diesel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Structure Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Structure Delivery Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68

**Table 108**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Civil Construction**

Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.10</b>	<b>1.80</b>	<b>2.15</b>	<b>0.01</b>	<b>0.10</b>	<b>0.04</b>	<b>628.10</b>	<b>0.01</b>	<b>0.02</b>	<b>634.96</b>
<b>Total</b>	<b>0.10</b>	<b>1.80</b>	<b>2.15</b>	<b>0.01</b>	<b>0.10</b>	<b>0.04</b>	<b>628.10</b>	<b>0.01</b>	<b>0.02</b>	<b>634.96</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Structure Delivery Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.46</b>	<b>0.00</b>	<b>0.00</b>	<b>1.48</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.46</b>	<b>0.00</b>	<b>0.00</b>	<b>1.48</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Paved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	1	Unpaved	1.5	6	1.311	0.131	1.97	0.20	0.01	0.00
Concrete Truck	1	Unpaved	1.5	6	2.273	0.227	3.41	0.34	0.01	0.00
Concrete Truck	1	Paved	58.5	6	0.003	0.001	0.19	0.05	0.00	0.00
Structure Delivery Truck	1	Unpaved	1.5	2	2.273	0.227	3.41	0.34	0.00	0.00
Structure Delivery Truck	1	Paved	58.5	2	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Unpaved	1.5	6	1.102	0.110	8.26	0.83	0.02	0.00
Worker Commute	5	Paved	58	6	0.003	0.001	0.97	0.24	0.00	0.00
<b>Offsite Total</b>							<b>18.40</b>	<b>2.04</b>	<b>0.05</b>	<b>0.01</b>
<b>Total</b>							<b>18.40</b>	<b>2.04</b>	<b>0.05</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 108**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Civil Construction**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 109**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Electrical Construction**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.12	7.08	17.14	0.03	0.62	0.57	2,906.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.12</b>	<b>7.08</b>	<b>17.14</b>	<b>0.03</b>	<b>0.62</b>	<b>0.57</b>	<b>2906.2</b>
Offsite Motor Vehicle Exhaust	0.05	1.47	0.21	0.00	0.03	0.00	216.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	18.01	1.94	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.47</b>	<b>0.21</b>	<b>0.00</b>	<b>18.05</b>	<b>1.94</b>	<b>216.3</b>
<b>Total</b>	<b>2.17</b>	<b>8.55</b>	<b>17.35</b>	<b>0.03</b>	<b>18.66</b>	<b>2.51</b>	<b>3122.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	7.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.04	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.4</b>
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>7.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	1	4	8
Flat Bed Truck w/Derrick	350	1	6	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Flat Bed Truck w/Derrick	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 109**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Electrical Construction**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
Flat Bed Truck w/Derrick	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
<b>Total</b>	<b>2.12</b>	<b>7.08</b>	<b>17.14</b>	<b>0.03</b>	<b>0.62</b>	<b>0.57</b>	<b>2879.03</b>	<b>0.19</b>	<b>0.07</b>	<b>2906.24</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.00	0.01	0.02	0.00	0.00	0.00	2.88	0.00	0.00	2.9
Flat Bed Truck w/Derrick	0.00	0.01	0.03	0.00	0.00	0.00	4.32	0.00	0.00	4.4
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.20</b>	<b>0.00</b>	<b>0.00</b>	<b>7.27</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab, 4x4	1	4	N/A	1.5
Bucket Truck	1	4	N/A	1.5
Flat Bed Truck w/Derrick	1	4	N/A	1.5
Worker Commute	5	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	MDV Diesel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck w/Derrick	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

**Table 109**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Electrical Construction**

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Bucket Truck	0.00	0.00	0.02	0.00	0.00	0.00	5.31	0.00	0.00	5.37
Flat Bed Truck w/Derrick	0.00	0.00	0.02	0.00	0.00	0.00	5.31	0.00	0.00	5.37
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.05</b>	<b>1.47</b>	<b>0.21</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>213.89</b>	<b>0.01</b>	<b>0.01</b>	<b>216.32</b>
<b>Total</b>	<b>0.05</b>	<b>1.47</b>	<b>0.21</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>213.89</b>	<b>0.01</b>	<b>0.01</b>	<b>216.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Flat Bed Truck w/Derrick	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.41
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.43</b>	<b>0.00</b>	<b>0.00</b>	<b>0.43</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.43</b>	<b>0.00</b>	<b>0.00</b>	<b>0.43</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Paved	0	0	0.000	0.000	0.00	0.00	0.00	0.00



**Table 109**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Electrical Construction**

<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	1	Unpaved	1.5	4	1.311	0.131	1.97	0.20	0.00	0.00
Bucket Truck	1	Unpaved	1.5	4	2.273	0.227	3.41	0.34	0.01	0.00
Flat Bed Truck w/Derrick	1	Unpaved	1.5	4	2.273	0.227	3.41	0.34	0.01	0.00
Worker Commute	5	Unpaved	1.5	4	1.102	0.110	8.26	0.83	0.02	0.00
Worker Commute	5	Paved	58	4	0.003	0.001	0.97	0.24	0.00	0.00
<b>Offsite Total</b>							<b>18.01</b>	<b>1.94</b>	<b>0.04</b>	<b>0.00</b>
<b>Total</b>							<b>18.01</b>	<b>1.94</b>	<b>0.04</b>	<b>0.00</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 110**

**Motor Vehicle Travel Distances**

**Estimate of Unpaved Travel Distance for Transmission Line Segments**

67.4	Total Mileage of Transmission Line
4	Number of Major Segments
17	Average Length of Major Segments
8.5	One-Way Distance to Middle of Segment

**Estimate of One-Way Paved Travel from Staging Yard to Transmission Line Unpaved Travel Segment**

5	Estimate of One-Way Paved Travel from Staging Yard to Transmission Line Unpaved Travel Segment
---	--

**Estimate of Paved Travel Distance for Workers**

29.5	Distance from Hesperia to North Side Road and Rt. 247
28	Distance from Barstow to North Side Road and Rt. 247
29	Average Distance for worker travel (one way)

**Estimate of On-Site Travel Distance for Substation Construction**

4	10 lengthwise passes (approx 2000 ft each)
---	--

**Table 111  
MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016												
Air Basin	MD	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(gal/hr)
Equipment	MaxHP	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O	Fuel	
Aerial Lifts	15	0.0101	0.0528	0.0630	0.0001	0.0025	0.0023	8.6	0.0009	0.0002	0.39	
	25	0.0150	0.0479	0.0887	0.0001	0.0043	0.0040	11.0	0.0014	0.0003	0.50	
	50	0.0433	0.1594	0.1635	0.0003	0.0117	0.0107	19.6	0.0039	0.0005	0.90	
	120	0.0416	0.2355	0.3027	0.0004	0.0220	0.0202	38.0	0.0037	0.0010	1.74	
	500	0.0949	0.4096	1.1069	0.0021	0.0329	0.0303	212.7	0.0086	0.0055	9.62	
	750	0.1769	0.7405	2.0785	0.0039	0.0608	0.0559	384.4	0.0160	0.0100	17.39	
Air Compressors	15	0.0104	0.0461	0.0643	0.0001	0.0037	0.0034	7.2	0.0009	0.0002	0.33	
	25	0.0219	0.0665	0.1225	0.0002	0.0066	0.0060	14.4	0.0020	0.0004	0.66	
	50	0.0674	0.2287	0.1980	0.0003	0.0166	0.0153	22.3	0.0061	0.0006	1.03	
	120	0.0630	0.3150	0.4008	0.0006	0.0336	0.0309	46.9	0.0057	0.0012	2.15	
	175	0.0829	0.5003	0.6409	0.0010	0.0347	0.0320	88.4	0.0075	0.0023	4.03	
	250	0.0839	0.2740	0.8339	0.0015	0.0256	0.0236	131.1	0.0076	0.0034	5.94	
	500	0.1387	0.4733	1.2758	0.0023	0.0421	0.0387	231.5	0.0125	0.0060	10.48	
	750	0.2164	0.7314	2.0513	0.0036	0.0667	0.0613	357.8	0.0195	0.0093	16.20	
Bore/Drill Rigs	15	0.0120	0.0631	0.0753	0.0002	0.0029	0.0027	10.3	0.0011	0.0003	0.47	
	25	0.0193	0.0658	0.1218	0.0002	0.0046	0.0042	16.0	0.0017	0.0004	0.73	
	50	0.0220	0.2221	0.2104	0.0004	0.0058	0.0053	31.0	0.0020	0.0008	1.42	
	120	0.0349	0.4666	0.3305	0.0009	0.0125	0.0115	77.1	0.0031	0.0020	3.51	
	175	0.0565	0.7533	0.4371	0.0016	0.0156	0.0143	140.9	0.0051	0.0037	6.41	
	250	0.0627	0.3422	0.3883	0.0021	0.0113	0.0104	187.9	0.0057	0.0049	8.50	
	500	0.1032	0.5506	0.6246	0.0031	0.0186	0.0171	311.0	0.0093	0.0081	14.06	
	750	0.2042	1.0879	1.2417	0.0062	0.0369	0.0339	614.5	0.0184	0.0159	27.78	
Cement and Mortar Mixers	15	0.0074	0.0386	0.0461	0.0001	0.0019	0.0017	6.3	0.0007	0.0002	0.29	
	25	0.0243	0.0771	0.1431	0.0002	0.0070	0.0065	17.5	0.0022	0.0005	0.80	
Concrete/Industrial Saws	25	0.0199	0.0678	0.1255	0.0002	0.0047	0.0043	16.5	0.0018	0.0004	0.75	
	50	0.0702	0.2670	0.2559	0.0004	0.0186	0.0171	30.2	0.0063	0.0008	1.39	
	120	0.0807	0.4720	0.5776	0.0009	0.0435	0.0400	74.1	0.0073	0.0019	3.38	
	175	0.1224	0.8659	1.0439	0.0018	0.0524	0.0482	160.1	0.0110	0.0042	7.29	
Cranes	50	0.0777	0.2653	0.2157	0.0003	0.0184	0.0170	23.2	0.0070	0.0006	1.08	
	120	0.0743	0.3530	0.4471	0.0006	0.0377	0.0347	50.1	0.0067	0.0013	2.29	
	175	0.0861	0.4779	0.6091	0.0009	0.0345	0.0318	80.3	0.0078	0.0021	3.66	
	250	0.0875	0.2631	0.7524	0.0013	0.0259	0.0238	112.1	0.0079	0.0029	5.08	
	500	0.1324	0.4428	1.0711	0.0018	0.0387	0.0356	179.9	0.0119	0.0047	8.16	
	750	0.2240	0.7451	1.8538	0.0030	0.0661	0.0608	302.8	0.0202	0.0079	13.73	
	9999	0.8238	2.7044	8.7440	0.0098	0.2551	0.2347	969.7	0.0743	0.0252	44.01	
Crawler Tractors	50	0.0943	0.3011	0.2384	0.0003	0.0214	0.0197	24.9	0.0085	0.0007	1.16	
	120	0.1072	0.4734	0.6371	0.0008	0.0532	0.0489	65.8	0.0097	0.0017	3.01	
	175	0.1425	0.7354	1.0083	0.0014	0.0566	0.0521	121.1	0.0129	0.0032	5.53	
	250	0.1494	0.4449	1.2413	0.0019	0.0468	0.0430	166.0	0.0135	0.0043	7.53	
	500	0.2181	0.7898	1.7418	0.0025	0.0668	0.0615	259.0	0.0197	0.0067	11.76	
	750	0.3925	1.4158	3.1882	0.0047	0.1211	0.1114	464.3	0.0354	0.0121	21.08	
1000	0.5965	2.2357	6.3162	0.0066	0.1927	0.1773	657.5	0.0538	0.0171	29.87		
Crushing/Proc. Equipment	50	0.1232	0.4488	0.3873	0.0006	0.0309	0.0284	44.0	0.0111	0.0012	2.03	

**Table 111**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016											
Air Basin		MD									
Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
	120	0.1052	0.5588	0.6766	0.0010	0.0554	0.0510	83.1	0.0095	0.0022	3.80
	175	0.1510	0.9530	1.1412	0.0019	0.0619	0.0570	167.1	0.0136	0.0044	7.62
	250	0.1551	0.5067	1.4525	0.0027	0.0453	0.0417	244.3	0.0140	0.0063	11.07
	500	0.2238	0.7534	1.9232	0.0037	0.0647	0.0595	373.3	0.0202	0.0097	16.90
	750	0.3515	1.1810	3.1224	0.0059	0.1027	0.0945	588.3	0.0317	0.0153	26.64
	9999	0.9136	2.9321	10.8003	0.0131	0.2933	0.2699	1306.6	0.0824	0.0339	59.21
Dumpers/Tenders	25	0.0093	0.0314	0.0587	0.0001	0.0024	0.0022	7.6	0.0008	0.0002	0.35
Excavators	25	0.0198	0.0676	0.1252	0.0002	0.0047	0.0043	16.4	0.0018	0.0004	0.75
	50	0.0580	0.2619	0.2164	0.0003	0.0147	0.0135	25.0	0.0052	0.0007	1.15
	120	0.0832	0.5065	0.5286	0.0009	0.0394	0.0363	73.6	0.0075	0.0019	3.36
	175	0.0971	0.6642	0.6554	0.0013	0.0354	0.0326	112.1	0.0088	0.0029	5.11
	250	0.1053	0.3386	0.7851	0.0018	0.0262	0.0241	158.5	0.0095	0.0041	7.18
	500	0.1494	0.4846	1.0223	0.0023	0.0366	0.0336	233.5	0.0135	0.0061	10.58
	750	0.2488	0.8033	1.7451	0.0039	0.0616	0.0567	387.1	0.0225	0.0100	17.53
Forklifts	50	0.0284	0.1484	0.1270	0.0002	0.0079	0.0073	14.7	0.0026	0.0004	0.68
	120	0.0312	0.2129	0.2110	0.0004	0.0148	0.0137	31.2	0.0028	0.0008	1.43
	175	0.0452	0.3313	0.3042	0.0006	0.0165	0.0152	56.0	0.0041	0.0015	2.55
	250	0.0489	0.1569	0.3511	0.0009	0.0116	0.0107	77.1	0.0044	0.0020	3.49
	500	0.0687	0.2146	0.4506	0.0011	0.0163	0.0150	110.9	0.0062	0.0029	5.02
Generator Sets	15	0.0130	0.0651	0.0900	0.0002	0.0048	0.0044	10.2	0.0012	0.0003	0.47
	25	0.0241	0.0811	0.1495	0.0002	0.0077	0.0070	17.6	0.0022	0.0005	0.80
	50	0.0637	0.2398	0.2530	0.0004	0.0175	0.0161	30.6	0.0057	0.0008	1.41
	120	0.0822	0.4767	0.6120	0.0009	0.0434	0.0399	77.9	0.0074	0.0020	3.56
	175	0.1013	0.7331	0.9458	0.0016	0.0434	0.0399	141.9	0.0091	0.0037	6.46
	250	0.1006	0.4058	1.2378	0.0024	0.0342	0.0314	212.3	0.0091	0.0055	9.61
	500	0.1438	0.6410	1.7347	0.0033	0.0507	0.0467	336.6	0.0130	0.0087	15.23
	750	0.2402	1.0347	2.9072	0.0055	0.0837	0.0770	543.3	0.0217	0.0141	24.58
	9999	0.6073	2.2406	8.4553	0.0105	0.2116	0.1947	1047.7	0.0548	0.0272	47.44
Graders	50	0.0815	0.2999	0.2473	0.0004	0.0196	0.0180	27.5	0.0074	0.0007	1.28
	120	0.1001	0.5191	0.6212	0.0009	0.0498	0.0459	74.9	0.0090	0.0020	3.43
	175	0.1213	0.7303	0.8612	0.0014	0.0475	0.0437	123.8	0.0109	0.0032	5.65
	250	0.1249	0.3933	1.0428	0.0019	0.0358	0.0329	172.0	0.0113	0.0045	7.79
	500	0.1577	0.5520	1.2378	0.0023	0.0445	0.0410	229.3	0.0142	0.0060	10.39
	750	0.3354	1.1685	2.6888	0.0049	0.0956	0.0880	485.3	0.0303	0.0126	22.00
Off-Highway Tractors	120	0.1804	0.6982	1.0539	0.0011	0.0891	0.0820	93.7	0.0163	0.0025	4.30
	175	0.1780	0.8159	1.2809	0.0015	0.0722	0.0664	130.3	0.0161	0.0034	5.96
	250	0.1414	0.4152	1.1789	0.0015	0.0482	0.0443	130.3	0.0128	0.0034	5.92
	750	0.5700	2.3652	4.7352	0.0057	0.1902	0.1750	567.6	0.0514	0.0148	25.83
	1000	0.8608	3.7053	8.7994	0.0082	0.2874	0.2644	813.6	0.0777	0.0212	37.05
Off-Highway Trucks	175	0.1162	0.7545	0.7637	0.0014	0.0417	0.0383	125.0	0.0105	0.0033	5.70
	250	0.1178	0.3648	0.8666	0.0019	0.0290	0.0267	166.4	0.0106	0.0043	7.54
	500	0.1854	0.5791	1.2508	0.0027	0.0448	0.0412	272.1	0.0167	0.0071	12.33
	750	0.3021	0.9393	2.0910	0.0044	0.0738	0.0679	441.3	0.0273	0.0115	19.99
	1000	0.4570	1.4115	4.8811	0.0063	0.1357	0.1248	624.2	0.0412	0.0162	28.29
Other Construction Equipment	15	0.0118	0.0617	0.0736	0.0002	0.0029	0.0026	10.1	0.0011	0.0003	0.46

**Table 111**  
**MDAQM, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016											
Air Basin	MD										
Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
	25	0.0159	0.0544	0.1007	0.0002	0.0038	0.0035	13.2	0.0014	0.0003	0.60
	50	0.0529	0.2444	0.2272	0.0004	0.0143	0.0131	28.0	0.0048	0.0007	1.29
	120	0.0745	0.5165	0.5488	0.0009	0.0383	0.0353	80.8	0.0067	0.0021	3.69
	175	0.0727	0.5856	0.5848	0.0012	0.0290	0.0267	106.4	0.0066	0.0028	4.85
	500	0.1242	0.4864	1.0402	0.0025	0.0350	0.0322	254.0	0.0112	0.0066	11.49
Other General Industrial Equipmen	15	0.0066	0.0390	0.0466	0.0001	0.0018	0.0017	6.4	0.0006	0.0002	0.29
	25	0.0185	0.0631	0.1169	0.0002	0.0044	0.0040	15.3	0.0017	0.0004	0.70
	50	0.0704	0.2449	0.1999	0.0003	0.0171	0.0158	21.7	0.0064	0.0006	1.01
	120	0.0900	0.4340	0.5404	0.0007	0.0463	0.0426	62.0	0.0081	0.0016	2.84
	175	0.0995	0.5662	0.7079	0.0011	0.0398	0.0366	95.8	0.0090	0.0025	4.37
	250	0.0987	0.2944	0.8771	0.0015	0.0278	0.0256	135.5	0.0089	0.0035	6.14
	500	0.1824	0.5588	1.4858	0.0026	0.0507	0.0466	265.2	0.0165	0.0069	12.01
	750	0.3031	0.9210	2.5481	0.0044	0.0855	0.0787	437.1	0.0273	0.0113	19.80
	1000	0.4268	1.3208	4.9252	0.0056	0.1383	0.1272	559.1	0.0385	0.0145	25.35
Other Material Handling Equipment	50	0.0977	0.3384	0.2779	0.0004	0.0238	0.0219	30.3	0.0088	0.0008	1.41
	120	0.0874	0.4225	0.5278	0.0007	0.0452	0.0416	60.6	0.0079	0.0016	2.78
	175	0.1253	0.7172	0.8995	0.0014	0.0504	0.0464	122.0	0.0113	0.0032	5.57
	250	0.1042	0.3135	0.9371	0.0016	0.0296	0.0273	144.9	0.0094	0.0038	6.57
	500	0.1300	0.4021	1.0713	0.0019	0.0365	0.0336	191.5	0.0117	0.0050	8.67
	9999	0.5858	1.7445	6.5141	0.0073	0.1824	0.1678	740.7	0.0529	0.0192	33.58
Pavers	25	0.0230	0.0774	0.1446	0.0002	0.0061	0.0056	18.6	0.0021	0.0005	0.85
	50	0.1116	0.3335	0.2691	0.0004	0.0252	0.0232	28.0	0.0101	0.0007	1.30
	120	0.1162	0.4925	0.7022	0.0008	0.0590	0.0543	69.1	0.0105	0.0018	3.17
	175	0.1522	0.7671	1.1259	0.0014	0.0626	0.0576	128.2	0.0137	0.0034	5.85
	250	0.1757	0.5365	1.5465	0.0022	0.0586	0.0539	194.2	0.0159	0.0051	8.81
	500	0.1954	0.7641	1.6700	0.0023	0.0640	0.0589	233.0	0.0176	0.0061	10.58
Paving Equipment	25	0.0152	0.0519	0.0962	0.0002	0.0036	0.0034	12.6	0.0014	0.0003	0.57
	50	0.0951	0.2826	0.2295	0.0003	0.0215	0.0198	23.9	0.0086	0.0006	1.11
	120	0.0911	0.3858	0.5516	0.0006	0.0467	0.0429	54.5	0.0082	0.0014	2.50
	175	0.1187	0.5999	0.8845	0.0011	0.0491	0.0452	100.9	0.0107	0.0026	4.61
	250	0.1076	0.3300	0.9691	0.0014	0.0360	0.0331	122.2	0.0097	0.0032	5.54
Plate Compactors	15	0.0050	0.0263	0.0314	0.0001	0.0012	0.0011	4.3	0.0005	0.0001	0.20
Pressure Washers	15	0.0062	0.0312	0.0431	0.0001	0.0023	0.0021	4.9	0.0006	0.0001	0.22
	25	0.0098	0.0329	0.0606	0.0001	0.0031	0.0029	7.1	0.0009	0.0002	0.33
	50	0.0224	0.0945	0.1138	0.0002	0.0069	0.0063	14.3	0.0020	0.0004	0.65
	120	0.0219	0.1404	0.1803	0.0003	0.0114	0.0105	24.1	0.0020	0.0006	1.10
Pumps	15	0.0106	0.0474	0.0661	0.0001	0.0038	0.0035	7.4	0.0010	0.0002	0.34
	25	0.0296	0.0896	0.1653	0.0002	0.0089	0.0081	19.5	0.0027	0.0005	0.89
	50	0.0773	0.2830	0.2871	0.0004	0.0207	0.0190	34.3	0.0070	0.0009	1.58
	120	0.0859	0.4842	0.6215	0.0009	0.0456	0.0419	77.9	0.0078	0.0020	3.56
	175	0.1051	0.7345	0.9483	0.0016	0.0450	0.0414	140.0	0.0095	0.0037	6.38
	250	0.1008	0.3910	1.1926	0.0023	0.0337	0.0310	201.2	0.0091	0.0052	9.10
	500	0.1567	0.6671	1.8006	0.0034	0.0540	0.0497	344.9	0.0141	0.0089	15.61
	750	0.2666	1.1029	3.0910	0.0057	0.0913	0.0840	570.2	0.0241	0.0148	25.80
	9999	0.8122	2.9422	11.0546	0.0136	0.2800	0.2576	1353.6	0.0733	0.0351	61.31

**Table 111  
MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016											
Air Basin											MD
Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
Rollers	15	0.0074	0.0386	0.0460	0.0001	0.0018	0.0017	6.3	0.0007	0.0002	0.29
	25	0.0161	0.0549	0.1016	0.0002	0.0038	0.0035	13.3	0.0015	0.0003	0.61
	50	0.0797	0.2677	0.2321	0.0003	0.0191	0.0176	26.0	0.0072	0.0007	1.20
	120	0.0794	0.3967	0.5105	0.0007	0.0415	0.0382	58.9	0.0072	0.0015	2.70
	175	0.1031	0.6146	0.7957	0.0012	0.0431	0.0396	108.0	0.0093	0.0028	4.93
	250	0.1041	0.3461	0.9947	0.0017	0.0333	0.0306	153.0	0.0094	0.0040	6.93
Rough Terrain Forklifts	500	0.1390	0.5316	1.2651	0.0021	0.0442	0.0406	218.9	0.0125	0.0057	9.92
	50	0.0838	0.3456	0.2951	0.0004	0.0216	0.0199	33.8	0.0076	0.0009	1.56
	120	0.0728	0.4227	0.4736	0.0007	0.0368	0.0339	62.4	0.0066	0.0016	2.85
	175	0.1079	0.7230	0.7786	0.0014	0.0422	0.0388	124.8	0.0097	0.0033	5.69
	250	0.1106	0.3588	0.9194	0.0019	0.0302	0.0278	170.6	0.0100	0.0044	7.73
	500	0.1588	0.5200	1.2074	0.0025	0.0427	0.0393	256.3	0.0143	0.0067	11.61
Rubber Tired Dozers	175	0.1849	0.8272	1.3057	0.0015	0.0739	0.0680	129.4	0.0167	0.0034	5.92
	250	0.2097	0.6062	1.7064	0.0021	0.0706	0.0650	183.3	0.0189	0.0048	8.34
	500	0.2792	1.1673	2.2363	0.0026	0.0915	0.0841	264.6	0.0252	0.0069	12.05
	750	0.4216	1.7575	3.4223	0.0040	0.1388	0.1277	398.4	0.0380	0.0104	18.14
	1000	0.6577	2.8383	6.5313	0.0059	0.2168	0.1995	591.4	0.0593	0.0154	26.95
	Rubber Tired Loaders	25	0.0204	0.0696	0.1289	0.0002	0.0048	0.0044	16.9	0.0018	0.0004
50		0.0900	0.3346	0.2780	0.0004	0.0218	0.0200	31.1	0.0081	0.0008	1.44
120		0.0771	0.4059	0.4822	0.0007	0.0386	0.0355	58.9	0.0070	0.0015	2.69
175		0.1021	0.6236	0.7285	0.0012	0.0402	0.0369	106.2	0.0092	0.0028	4.85
250		0.1055	0.3354	0.8884	0.0017	0.0302	0.0278	148.8	0.0095	0.0039	6.75
500		0.1591	0.5590	1.2560	0.0023	0.0449	0.0413	236.8	0.0144	0.0062	10.73
750		0.3276	1.1451	2.6434	0.0049	0.0933	0.0859	485.1	0.0296	0.0126	21.98
1000		0.4390	1.5579	4.9818	0.0060	0.1421	0.1307	593.3	0.0396	0.0154	26.91
Scrapers	120	0.1563	0.6768	0.9284	0.0011	0.0780	0.0718	93.8	0.0141	0.0025	4.30
	175	0.1768	0.8992	1.2602	0.0017	0.0708	0.0652	147.9	0.0160	0.0039	6.76
	250	0.1909	0.5685	1.6065	0.0024	0.0606	0.0558	209.3	0.0172	0.0054	9.50
	500	0.2734	1.0101	2.2158	0.0032	0.0850	0.0782	321.1	0.0247	0.0084	14.58
	750	0.4742	1.7450	3.9092	0.0056	0.1485	0.1366	554.8	0.0428	0.0144	25.19
Signal Boards	15	0.0072	0.0376	0.0449	0.0001	0.0018	0.0016	6.2	0.0006	0.0002	0.28
	50	0.0831	0.3131	0.3029	0.0005	0.0219	0.0201	36.2	0.0075	0.0010	1.67
	120	0.0871	0.5067	0.6223	0.0009	0.0466	0.0428	80.1	0.0079	0.0021	3.66
	175	0.1167	0.8280	1.0071	0.0017	0.0497	0.0457	154.4	0.0105	0.0040	7.03
	250	0.1317	0.4994	1.4456	0.0029	0.0424	0.0390	255.1	0.0119	0.0066	11.54
Skid Steer Loaders	25	0.0183	0.0593	0.1106	0.0002	0.0053	0.0049	13.8	0.0017	0.0004	0.63
	50	0.0323	0.2087	0.1951	0.0003	0.0094	0.0087	25.5	0.0029	0.0007	1.17
	120	0.0295	0.2693	0.2409	0.0005	0.0138	0.0127	42.7	0.0027	0.0011	1.95
Surfacing Equipment	50	0.0375	0.1299	0.1218	0.0002	0.0093	0.0085	14.1	0.0034	0.0004	0.65
	120	0.0778	0.4119	0.5357	0.0007	0.0402	0.0370	63.7	0.0070	0.0017	2.91
	175	0.0733	0.4690	0.6121	0.0010	0.0307	0.0283	85.7	0.0066	0.0022	3.91
	250	0.0832	0.3010	0.8495	0.0015	0.0280	0.0257	134.7	0.0075	0.0035	6.10
	500	0.1259	0.5481	1.2540	0.0022	0.0425	0.0391	221.0	0.0114	0.0057	10.01
	750	0.2001	0.8599	2.0162	0.0035	0.0675	0.0621	346.7	0.0181	0.0090	15.71
Sweepers/Scrubbers	15	0.0124	0.0728	0.0869	0.0002	0.0034	0.0031	11.9	0.0011	0.0003	0.54

**Table 111**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016											
Air Basin		MD									
Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
	25	0.0236	0.0807	0.1494	0.0002	0.0056	0.0051	19.6	0.0021	0.0005	0.89
	50	0.0664	0.3077	0.2709	0.0004	0.0182	0.0167	31.5	0.0060	0.0008	1.45
	120	0.0774	0.5009	0.5315	0.0009	0.0391	0.0360	75.0	0.0070	0.0020	3.43
	175	0.1096	0.7990	0.7988	0.0016	0.0427	0.0393	138.9	0.0099	0.0036	6.33
	250	0.0972	0.3248	0.7925	0.0018	0.0255	0.0235	161.9	0.0088	0.0042	7.33
Tractors/Loaders/Backhoes	25	0.0192	0.0653	0.1215	0.0002	0.0048	0.0044	15.8	0.0017	0.0004	0.72
	50	0.0622	0.2946	0.2534	0.0004	0.0162	0.0149	30.3	0.0056	0.0008	1.40
	120	0.0524	0.3456	0.3522	0.0006	0.0253	0.0233	51.7	0.0047	0.0014	2.36
	175	0.0787	0.5844	0.5566	0.0011	0.0292	0.0269	101.3	0.0071	0.0026	4.62
	250	0.1024	0.3530	0.7902	0.0019	0.0260	0.0239	171.6	0.0092	0.0045	7.77
	500	0.1983	0.6958	1.4074	0.0039	0.0496	0.0456	344.5	0.0179	0.0089	15.60
Trenchers	750	0.2988	1.0436	2.1713	0.0058	0.0755	0.0695	516.8	0.0270	0.0134	23.40
	15	0.0098	0.0516	0.0616	0.0001	0.0024	0.0022	8.5	0.0009	0.0002	0.39
	25	0.0397	0.1354	0.2507	0.0004	0.0094	0.0086	32.9	0.0036	0.0009	1.50
	50	0.1303	0.3809	0.3138	0.0004	0.0293	0.0269	32.9	0.0118	0.0009	1.53
	120	0.1078	0.4558	0.6645	0.0008	0.0550	0.0506	64.8	0.0097	0.0017	2.97
	175	0.1676	0.8488	1.2792	0.0016	0.0699	0.0643	143.8	0.0151	0.0038	6.56
	250	0.1989	0.6255	1.8028	0.0025	0.0690	0.0635	222.7	0.0179	0.0058	10.11
Welders	500	0.2558	1.0674	2.2733	0.0031	0.0873	0.0803	311.0	0.0231	0.0081	14.13
	750	0.4845	2.0123	4.3689	0.0059	0.1663	0.1530	586.4	0.0437	0.0153	26.63
	15	0.0089	0.0396	0.0552	0.0001	0.0032	0.0030	6.2	0.0008	0.0002	0.28
	25	0.0171	0.0519	0.0957	0.0001	0.0051	0.0047	11.3	0.0015	0.0003	0.51
	50	0.0725	0.2489	0.2260	0.0003	0.0182	0.0167	25.9	0.0065	0.0007	1.20
	120	0.0498	0.2581	0.3303	0.0005	0.0267	0.0245	39.5	0.0045	0.0010	1.80
	175	0.0857	0.5408	0.6972	0.0011	0.0364	0.0335	98.1	0.0077	0.0026	4.47
	250	0.0701	0.2427	0.7413	0.0013	0.0222	0.0205	119.0	0.0063	0.0031	5.39
500	0.0912	0.3360	0.9083	0.0016	0.0291	0.0268	167.4	0.0082	0.0043	7.58	

<sup>a</sup> ROG, CO, NOx, SOx, PM, CO2 and CH4 emission factors calculated by dividing total daily emissions in MDAB by total hours of operation in MDAB by equipment type and horsepower range calculated with CARB OFFROAD 2007 model.

Hourly fuel use calculated by dividing total daily fuel use in MDAB by total hours of operation in MDAB by equipment type and horsepower range.

Diesel PM10 emission factor = PM emission factor

Diesel PM2.5 emission factor [lb/hr] = PM10 emission factor [lb/hr] x PM2.5 fraction of PM10

PM2.5 Fraction= 0.920

From Appendix A, Final-Methodology to Calculate Particulate Matter (PM) 2.5

and PM 2.5 Significance Thresholds, SCAQMD, October 2006,

[http://www.aqmd.gov/ceqa/handbook/PM2\\_5/PM2\\_5.html](http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html)

N2O emission factors calculated by multiplying hourly fuel use by 0.26 g/gallon from Table 13.7 from 2013 Climate Registry Default Emission Factors downloaded from

<http://www.theclimateregistry.org/downloads/2013/01/2013-Climat-Registry-Default-Emissions-Factors.pdf>

Table 112

Motor Vehicle Entrained Road Dust Emission Factors

Vehicle Type	Surface	Silt Loading (sL, g/m2) or Silt Content (s, %) <sup>a</sup>	Average Weight (W) (tons) <sup>b</sup>	Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup>	Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup>	Control Efficiency (%) <sup>d</sup>	Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup>	Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup>
1-Ton Crew Cab Flatbed, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab Flatbed, 4x4	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
1-Ton Crew Cab, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
1-Ton Crew Cab, 4x4, Gale-Pisgah	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4, Gale-Pisgah	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
1-Ton Crew Cab, 4x4, Substation	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4, Substation	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
1-Ton Crew Cab, 4x4, Transmission	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4, Transmission	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
1-Ton Truck, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Truck, 4x4	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
2 Ton Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
2 Ton Truck	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
3/4-Ton Pick-up Truck, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
3/4-Ton Pick-up Truck, 4x4	Unpaved	8	3.4	1.10E+00	1.10E-01	0%	1.10E+00	1.10E-01
3/4-Ton Truck, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
3/4-Ton Truck, 4x4	Unpaved	8	3.4	1.10E+00	1.10E-01	0%	1.10E+00	1.10E-01
40-Foot Flat Bed Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
40-Foot Flat Bed Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Aggregate Base Delivery Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Aggregate Base Delivery Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Asphalt Delivery Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Asphalt Delivery Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Auger Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Auger Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Boom Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Boom Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01



Table 112

Motor Vehicle Entrained Road Dust Emission Factors

Vehicle Type	Surface	Silt Loading (sL, g/m2) or Silt Content (s, %) <sup>a</sup>	Average Weight (W) (tons) <sup>b</sup>	Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup>	Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup>	Control Efficiency (%) <sup>d</sup>	Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup>	Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup>
Boom/Crane Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Boom/Crane Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Bucket Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Bucket Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Carry-all Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Carry-all Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Concrete Mixer Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Concrete Mixer Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Concrete Redi-Mix Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Concrete Redi-Mix Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Concrete Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Concrete Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Crew Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Crew Truck	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
Dump Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Dump Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Extendable Flat Bed Pole Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Extendable Flat Bed Pole Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Flat Bed Pole Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Flat Bed Pole Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Flat Bed Truck w/Derrick	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Flat Bed Truck w/Derrick	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Flat Bed Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Flat Bed Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Flatbed Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Flatbed Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Foreman Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Foreman Truck	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
Fuel, Helicopter Support Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Fuel, Helicopter Support Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01

Table 112

Motor Vehicle Entrained Road Dust Emission Factors

Vehicle Type	Surface	Silt Loading (sL, g/m2) or Silt Content (s, %) <sup>a</sup>	Average Weight (W) (tons) <sup>b</sup>	Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup>	Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup>	Control Efficiency (%) <sup>d</sup>	Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup>	Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup>
Gravel Delivery Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Gravel Delivery Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Inspection Services	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Inspection Services	Unpaved	8	3.4	1.10E+00	1.10E-01	0%	1.10E+00	1.10E-01
Jet A Fuel Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Jet A Fuel Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Lowboy Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Lowboy Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Manlift/Bucket Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Manlift/Bucket Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Pick-up Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Pick-up Truck	Unpaved	8	10	1.79E+00	1.79E-01	0%	1.79E+00	1.79E-01
Pipe Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Pipe Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Sleeving Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Sleeving Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Soils Test Crew Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Soils Test Crew Truck	Unpaved	8	6.5	1.47E+00	1.47E-01	0%	1.47E+00	1.47E-01
Splicing Lab	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Splicing Lab	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
Splicing Rig	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Splicing Rig	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
Stake Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Stake Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Static Truck/Tensioner	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Static Truck/Tensioner	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Structure Delivery Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Structure Delivery Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Survey Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Survey Truck	Unpaved	8	3.4	1.10E+00	1.10E-01	0%	1.10E+00	1.10E-01

**Table 112**

**Motor Vehicle Entrained Road Dust Emission Factors**

Vehicle Type	Surface	Silt Loading (sL, g/m2) or Silt Content (s, %) <sup>a</sup>	Average Weight (W) (tons) <sup>b</sup>	Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup>	Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup>	Control Efficiency (%) <sup>d</sup>	Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup>	Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup>
Tool Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Tool Truck	Unpaved	8	3.4	1.10E+00	1.10E-01	0%	1.10E+00	1.10E-01
Truck, Semi Tractor	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Truck, Semi Tractor	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Water Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Water Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Wire Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Wire Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Wiring Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Wiring Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Worker Commute	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Worker Commute	Unpaved	8	3.4	1.10E+00	1.10E-01	0%	1.10E+00	1.10E-01

<sup>a</sup> Paved road silt loading from MDAQMD Mineral Guidance for paved low traffic road.

Unpaved road silt content from MDAQMD Mineral Guidance for unpaved industrial haul road.

<sup>b</sup> Average paved on-road vehicle weight in San Bernardino County from ARB Emission Inventory Methodology 7.9, Entrained Paved Road Dust (1997)

Unpaved worker commuting weight on access road assumed to be same as paved road weight

Unpaved weight for other trucks is based on upper limit of 33,000 lbs for medium heavy-duty trucks. Heavy heavy duty trucks are also in this range, as they range from 30,001 lbs to 60,000.

<sup>c</sup> Equations:

$$EF(\text{paved}) = k_p (sL)^{0.91} (W)^{1.02}$$

$$EF(\text{unpaved}) = k_u (s/12)^a (W/3)^b$$

Ref: AP-42, Section 13.2.1, "Paved Roads," January 2011

Ref: AP-42, Section 13.2.2, "Unpaved Roads," November 2006

Constants:

$k_p =$	0.0022	(Particle size multiplier for PM10)
	0.00054	(Particle size multiplier for PM2.5)
$k_u =$	1.5	(Particle size multiplier for PM)
	0.15	(Particle size multiplier for PM2.5)
$a =$	0.9	for PM10
	0.9	for PM2.5
$b =$	0.45	for PM10

**Table 112**

**Motor Vehicle Entrained Road Dust Emission Factors**

Vehicle Type	Surface	Silt Loading (sL, g/m <sup>2</sup> ) or Silt Content (s, %) <sup>a</sup>	Average Weight (W) (tons) <sup>b</sup>	Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup>	Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup>	Control Efficiency (%) <sup>d</sup>	Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup>	Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup>
	0.45		for PM2.5					

**Table 113  
Commuter Vehicle And Pick-up Truck Emission Factors**

EMFAC 2011  
2016 Estimated Annual Emissions  
EMFAC 2011 Vehicle Categories  
San Bernardino COUNTY  
Mojave Desert AIR BASIN  
Mojave Desert AQMD  
All Model Years

Comm. Vehicles Gas (pounds/mile)		MDV Diesel (pounds/mile)		MDV Gas (pounds/mile)		MDV Combo (pounds/mile)	
CO	0.00502350	CO	0.00036597	CO	0.00784027	CO	0.00410312
NOx	0.00054760	NOx	0.00112028	NOx	0.00114357	NOx	0.00113192
ROG	0.00017532	ROG	0.00006639	ROG	0.00028277	ROG	0.00017458
SOx	0.00000845	SOx	0.00000827	SOx	0.00001317	SOx	0.00001072
PM10	0.00010306	PM10	0.00014987	PM10	0.00010343	PM10	0.00012665
PM2.5	0.00000402	PM2.5	0.00004711	PM2.5	0.00000438	PM2.5	0.00002575
CO2	0.69705741	CO2	0.74885278	CO2	1.15450592	CO2	0.95167935
CH4	0.00004259	CH4	0.00000308	CH4	0.00007002	CH4	0.00003655
N2O	0.00002278	N2O	0.00002848	N2O	0.00004757	N2O	0.00003803

Note: Commuter vehicles are based on emissions from gasoline LDV, LDT1, and LDT2

Methane and N2O calculated as prescribed by ARB:

[http://www.arb.ca.gov/msei/emfac2011-faq.htm#emfac2011\\_web\\_db\\_qstn07](http://www.arb.ca.gov/msei/emfac2011-faq.htm#emfac2011_web_db_qstn07)

- **How do I calculate Methane (CH4) and Nitrous Oxide (N2O) emissions?**
  - Methane (CH4) calculation method
    - Run EMFAC2011-LDV to calculate CH4 for those vehicle categories;
    - Use  $CH4 = 0.0408 * TOG = 0.058821 * THC$  to calculate CH4 for EMFAC2011-HD categories.
  - Nitrous Oxide (N2O) calculation method
    - Use 4.16% of NOx to calculate N2O for all gasoline vehicles, the same assumption as for the emissions inventory for the [Advanced Clean Cars rule](#);
    - Use 0.3316 g/gallon fuel to calculate for all diesel vehicles as the GHG inventory.

**Table 114**  
**Light Heavy-Duty and Heavy Heavy-Duty Vehicle Emission Factors**

EMFAC 2011  
 2016 Estimated Annual Emissions  
 EMFAC 2011 Vehicle Categories  
 San Bernardino COUNTY  
 Mojave Desert AIR BASIN  
 Mojave Desert AQMD  
 All Model Years

LHDT Diesel (pounds/mile)		HHDT Diesel (pounds/mile)	
CO	0.00192798	CO	0.00284760
NOx	0.01237034	NOx	0.01656235
ROG	0.00027862	ROG	0.00042317
SOx	0.00001103	SOx	0.00003500
PM10	0.00026112	PM10	0.00054297
PM2.5	0.00005485	PM2.5	0.00030129
CO2	1.11519022	CO2	3.54025345
CH4	0.00001294	CH4	0.00001966
N2O	0.00003802	N2O	0.00012069

Note: HHDT is based on the emissions from the T7 Tractor.

Methane and N2O calculated as prescribed by ARB:

[http://www.arb.ca.gov/msei/emfac2011-faq.htm#emfac2011\\_web\\_db\\_qstn07](http://www.arb.ca.gov/msei/emfac2011-faq.htm#emfac2011_web_db_qstn07)

- **How do I calculate Methane (CH4) and Nitrous Oxide (N2O) emissions?**
  - Methane (CH4) calculation method
    - Run EMFAC2011-LDV to calculate CH4 for those vehicle categories;
    - Use  $CH_4 = 0.0408 * TOG = 0.058821 * THC$  to calculate CH4 for EMFAC2011-HD categories.
  - Nitrous Oxide (N2O) calculation method
    - Use 4.16% of NOx to calculate N2O for all gasoline vehicles, the same assumption as for the emissions inventory for the [Advanced Clean Cars rule](#);
    - Use 0.3316 g/gallon fuel to calculate for all diesel vehicles as the GHG inventory.

**Table 115**

**Fugitive Dust Emission Factors  
Soil Dropping During Excavation**

Emission Factor [lb/cu. yd] = 0.0032 x (mean wind speed [mi/hr] / 5)<sup>1.3</sup> / (moisture [%] / 2)<sup>1.4</sup> x (number drops per ton) x (density [ton/cu. yd]) x k  
Reference: AP-42, Equation (1), Section 13.2.4, November 2006

Parameter	Value	Basis
Mean Wind Speed	7.7	Conservative default from Wind Erosion from Unpaved Areas and Roads, MDAQMD Mineral Guidance.
Moisture	0.5	Conservative default from Bulldozing, Scraping and Grading, MDAQMD Mineral Guidance.
Number Drops	4	Assumption
Soil Density	1.215	Table 2.46, Handbook of Solid Waste Management

PM10 Emission Factor 6.65E-02 lb/cu. yd (k = 0.35)  
PM2.5 Emission Factor 1.01E-02 lb/cu. yd (k = 0.053)

Emissions [pounds per day] = Controlled emission factor [pounds per cubic yard] x Volume soil handled [cubic yards per day]

**Storage Pile Wind Erosion**

Emission Factor [lb/day-acre] = k x 1.7 x (silt content [%] / 1.5) x (365 / 235) x (percentage of time unobstructed wind exceeds 12 mph / 15)  
Reference: MDAQMD Emission Inventory Guidance, Mineral Handling and Processing Industries, April 2000

Parameter	Value	Basis
Silt Content	30	Conservative default from Bulldozing, Scraping and Grading, MDAQMD Mineral Guidance.
Pct. time wind > 12 mph	100	Worst-case assumption

PM10 Emission Factor (Uncontrolled) 176.0 lb/day-acre (k = 0.5)  
PM2.5 Emission Factor (Uncontrolled) 70.4 lb/day-acre (k = 0.2)  
Reduction from Watering Twice/Day 90% Control efficiency from watering storage pile by hand at a rate of 1.4 gallons/hour-yard<sup>2</sup>, Table XI-B, Mitigation Measure Examples, Fugitive Dust from Materials Handling, [http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/MM\\_fugitive.html](http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/MM_fugitive.html)  
Controlled PM10 Emission Factor 17.6 lb/day-acre  
Controlled PM2.5 Emission Factor 7.0 lb/day-acre

Emissions [pounds per day] = Controlled emission factor [pounds per acre-day] x Storage pile surface area [acres]

**Bulldozing, Scraping and Grading**

**Table 115**

**Fugitive Dust Emission Factors**

PM10 Emission Factor [lb/hr] =  $0.75 \times (\text{silt content } [\%])^{1.5} / (\text{moisture})^{1.4}$

PM2.5 Emission Factor [lb/hr] =  $0.60 \times (\text{silt content } [\%])^{1.2} / (\text{moisture})^{1.3}$

Reference: AP-42, Table 11.9-1, July 1998

Parameter	Value	Basis
Silt Content	15	Default value from MDAQMD Rule 403.2 (F)
Moisture	0.5	Conservative default from Bulldozing, Scraping and Grading, MDAQMD Mineral Guidance.

PM10 Emission Factor 114.98 lb/hr

PM2.5 Emission Factor 38.09 lb/hr

Emissions [pounds per day] = Controlled emission factor [pounds per hour] x Bulldozing, scraping or grading time [hours/day]



## **Controlled Proposed Project Emissions**

**Table 1  
Controlled Annual Construction Emissions**

**Controlled Annual Construction Emissions<sup>a</sup>**

<b>Source</b>	<b>VOC (tons/year)</b>	<b>CO (tons/year)</b>	<b>NOX (tons/year)</b>	<b>SOX (tons/year)</b>	<b>PM10 (tons/year)</b>	<b>PM2.5 (tons/year)</b>	<b>CO2e (tons/year)</b>
Off-Road Equipment Exhaust (Unmitigated)	10.78	42.51	85.10	0.17	3.33	3.05	16,301.45
Percentage Reduction from APM-1 <sup>b</sup>	0%	0%	20%	0%	45%	45%	0%
Emissions Reduction from APM-1	0.00	0.00	17.02	0.00	1.50	1.37	0.00
<b>Off-Road Equipment Exhaust (Mitigated)</b>	<b>10.78</b>	<b>42.51</b>	<b>68.08</b>	<b>0.17</b>	<b>1.83</b>	<b>1.68</b>	<b>16,301.45</b>
Other Sources (Unmitigated)	5.28	21.75	34.19	7.66	1,527.39	359.38	9,806.08
Emissions Reduction from APM-2 <sup>c</sup>	0.00	0.00	0.00	0.00	1,266.32	326.45	0.00
<b>Other Sources (Mitigated)</b>	<b>5.28</b>	<b>21.75</b>	<b>34.19</b>	<b>7.66</b>	<b>261.07</b>	<b>32.94</b>	<b>9,806.08</b>
<b>Total Emissions (Mitigated)</b>	<b>16.06</b>	<b>64.26</b>	<b>102.27</b>	<b>7.83</b>	<b>262.90</b>	<b>34.61</b>	<b>26,107.52</b>

<sup>a</sup> Maximum annual emissions are during months 1 through 12

<sup>b</sup> Percentage reductions that would be achieved by using equipment with engines that meet Tier 3 emission standards instead of Tier 2 emission standards.

Percentages from TABLE II - OFF-ROAD ENGINE EMISSION RATES & COMPARISON OF UNCONTROLLED TO TIERED RATES AND TIERED TO TIERED RATES,

Downloaded from [http://www.aqmd.gov/ceqa/handbook/mitigation/offroad/MM\\_offroad.html](http://www.aqmd.gov/ceqa/handbook/mitigation/offroad/MM_offroad.html)

<sup>c</sup> Emission reductions from watering to maintain a soil moisture content of 10 percent during soil handling, grading, bulldozing and scraping and limiting speeds on unpaved roads to 15 mph

**Table 2  
Operational Emissions - Controlled Fugitive PM**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Emergency Generator Testing	0.40	4.34	7.61	0.01	0.25	0.25	706.90
SF <sub>6</sub> Leakage	--	--	--	--	--	--	1,229.70
Motor Vehicle Exhaust	0.02	0.13	0.39	0.00	0.05	0.02	263.24
Motor Vehicle Fugitive PM	--	--	--	--	41.15	4.25	
<b>Total</b>	<b>0.42</b>	<b>4.47</b>	<b>8.00</b>	<b>0.01</b>	<b>41.46</b>	<b>4.52</b>	<b>2,199.84</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Emergency Generator Testing	0.01	0.11	0.20	0.00	0.01	0.01	18.38
SF <sub>6</sub> Leakage	--	--	--	--	--	--	224.42
Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	1.25
Motor Vehicle Fugitive PM	--	--	--	--	0.04	0.01	--
<b>Total</b>	<b>0.01</b>	<b>0.11</b>	<b>0.20</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>244.05</b>

**Emergency Generator Testing Emissions**

Horsepower	Hours/Day	Fuel Use (gal/hr)	Emission Factors (g/bhp-hr) <sup>a</sup>					Emission Factors (g/gal)		
			CO	VOC <sup>b</sup>	NOx <sup>b</sup>	PM10 <sup>c</sup>	PM2.5 <sup>c</sup>	CO <sub>2</sub> <sup>d</sup>	CH <sub>4</sub> <sup>e</sup>	N <sub>2</sub> O <sup>e</sup>
757	1	31.3	2.6	0.24	4.56	0.15	0.15	10,210	0.41	0.083

<sup>a</sup> Emission factors assumed the same as emission limits for emergency CI engine in Title 17, CCR, Section 93115.6 Table 2

<sup>b</sup> For NMHC+NOx limit, emissions assumed to be 5 percent ROC

and 95 percent NOx, from Table D-25 of 2011 Carl Moyer Program Guidelines - <http://www.arb.ca.gov/msprog/moyer/guidelines/current.htm>

<sup>c</sup> PM10 and PM2.5 assumed to be same as PM emission standards.

<sup>d</sup> From Table C-1 of Title 40, Code of Federal Regulations, Subpart 98 for No. 2 distillate fuel oil.

<sup>e</sup> From Table C-2 of Title 40, Code of Federal Regulations, Subpart 98 for No. 2 distillate fuel oil.

Load Factor	Emission Rates (lb/hr)								
	CO <sup>a</sup>	VOC <sup>a</sup>	NOx <sup>a</sup>	SOx <sup>b</sup>	PM10 <sup>a</sup>	PM2.5 <sup>a</sup>	CO <sub>2</sub> <sup>c</sup>	CH <sub>4</sub> <sup>c</sup>	N <sub>2</sub> O <sup>c</sup>
1	4.34	0.40	7.61	0.007	0.25	0.25	704.53	0.03	0.01

Diesel Fuel Density = 6.943 lb/gal

Diesel Fuel Sulfur = 15 ppmw

<sup>a</sup> Emission Rate [lb/hr] = Emission Factor [g/bhp-hr] x Engine Horsepower [hp] x Load Factor [unitless] / 453.6 [g/lb]

<sup>b</sup> Emission Rate [lb/hr] = Fuel Use [gal/hr] x Fuel Density [lb/gal] x Fuel Sulfur [ppmw] x 10<sup>-6</sup> x 2 [lb SO<sub>2</sub>/lb S]

<sup>c</sup> Emission Rate [lb/hr] = Emission Factor [g/gal] x Fuel Use [gal/hr] / 453.6 [g/lb]

Daily Emissions (lb/day) <sup>a</sup>									
CO	VOC	NOx	SOx	PM10	PM2.5	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e <sup>b</sup>
4.34	0.40	7.61	0.01	0.25	0.25	704.53	0.03	0.01	706.90

**Table 2**  
**Operational Emissions - Controlled Fugitive PM**

<sup>a</sup> Daily Emissions [lb/day] = Hourly Emissions [lb/hr-unit] x Operating Time [hr/day]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2e</sub>) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

Op. (hr/year)	Annual Emissions (tons) <sup>a</sup>									
	CO	VOC	NOx	SOx	PM10	PM2.5	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2e</sub>
52	0.11	0.01	0.20	0.00	0.01	0.01	18.32	0.00	0.00	18.38

<sup>a</sup> Annual Emissions [tons] = Hourly Emissions [lb/hr] x Operating Time [hr/year]

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
1-Ton Crew Cab, 4x4, Substation	1	48	N/A	60
1-Ton Crew Cab, 4x4, Transmission	1	2	N/A	127.4
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	1	1	N/A	71
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	1	N/A	89

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO <sub>2</sub> (lb/mi) <sup>a</sup>	CH <sub>4</sub> (lb/mi) <sup>a</sup>	N <sub>2</sub> O (lb/mi) <sup>a</sup>
1-Ton Crew Cab, 4x4, Substation	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab, 4x4, Transmission	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab, 4x4, Gale-Pisgah	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO <sub>2</sub> (lb/day) <sup>a</sup>	CH <sub>4</sub> (lb/day) <sup>a</sup>	N <sub>2</sub> O (lb/day) <sup>a</sup>	CO <sub>2e</sub> (lb/day) <sup>b</sup>
1-Ton Crew Cab, 4x4, Substation	0.00	0.02	0.07	0.00	0.01	0.00	44.93	0.00	0.00	45.46
1-Ton Crew Cab, 4x4, Transmission	0.01	0.05	0.14	0.00	0.02	0.01	95.40	0.00	0.00	96.54
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	0.00	0.03	0.08	0.00	0.01	0.00	53.17	0.00	0.00	53.80
1-Ton Crew Cab, 4x4, Gale-Pisgah	0.01	0.03	0.10	0.00	0.01	0.00	66.65	0.00	0.00	67.44
<b>Total</b>	<b>0.02</b>	<b>0.13</b>	<b>0.39</b>	<b>0.00</b>	<b>0.05</b>	<b>0.02</b>	<b>260.15</b>	<b>0.00</b>	<b>0.01</b>	<b>263.24</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2e</sub>) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2e</sub> (tons) <sup>b</sup>
1-Ton Crew Cab, 4x4, Substation	0.00	0.00	0.00	0.00	0.00	0.00	1.08	0.00	0.00	1.09
1-Ton Crew Cab, 4x4, Transmission	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.10
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03

**Table 2**  
**Operational Emissions - Controlled Fugitive PM**

1-Ton Crew Cab, 4x4, Gale-Pisgah	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.23</b>	<b>0.00</b>	<b>0.00</b>	<b>1.25</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
1-Ton Crew Cab, 4x4, Substation	1	Unpaved	0	48	0.564	0.056	0.00	0.00	0.00	0.00
1-Ton Crew Cab, 4x4, Substation	1	Paved	60	48	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Crew Cab, 4x4, Transmission	1	Unpaved	67.4	2	0.564	0.056	37.98	3.80	0.04	0.00
1-Ton Crew Cab, 4x4, Transmission	1	Paved	60	2	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	1	Unpaved	4	1	0.564	0.056	2.25	0.23	0.00	0.00
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	1	Paved	67	1	0.003	0.001	0.22	0.05	0.00	0.00
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	Unpaved	0	1	0.564	0.056	0.00	0.00	0.00	0.00
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	Paved	89	1	0.003	0.001	0.30	0.07	0.00	0.00
<b>Total</b>							<b>41.15</b>	<b>4.25</b>	<b>0.04</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**SF<sub>6</sub> Leakage Greenhouse Gas Emissions**

Item	Value	Units
Total SF <sub>6</sub>	3,756	pounds
SF <sub>6</sub> Leakage Rate	0.5	%/year
SF <sub>6</sub> Emissions	18.78	pounds
SF <sub>6</sub> Global Warming Potential <sup>a</sup>	23,900	
<b>CO<sub>2</sub>e Emissions<sup>b</sup></b>	<b>1,230</b>	<b>lbs/day</b>
<b>CO<sub>2</sub>e Emissions<sup>b</sup></b>	<b>224</b>	<b>tpy</b>

<sup>a</sup> From Table A-1 of Title 40, Code of Federal Regulations, Subpart 98

<sup>b</sup> CO<sub>2</sub>e emissions [tpy] = SF<sub>6</sub> emissions [lb] x

Global warming potential [lb CO<sub>2</sub>e/lb SF<sub>6</sub>] / 2000 [lb/ton]

**Table 3**  
**Controlled Annual Construction Emissions**

**Controlled Annual Construction Emissions on BLM Land<sup>a</sup>**

<b>Source</b>	<b>VOC (tons/year)</b>	<b>CO (tons/year)</b>	<b>NOX (tons/year)</b>	<b>SOX (tons/year)</b>	<b>PM10 (tons/year)</b>	<b>PM2.5 (tons/year)</b>	<b>CO2e (tons/year)</b>
Off-Road Equipment Exhaust (Unmitigated)	1.79	7.13	14.16	0.03	0.55	0.51	2,764.45
Percentage Reduction from APM-1 <sup>b</sup>	0%	0%	20%	0%	45%	45%	0%
Emissions Reduction from APM-1	0.00	0.00	2.83	0.00	0.25	0.23	0.00
<b>Off-Road Equipment Exhaust (Mitigated)</b>	<b>1.79</b>	<b>7.13</b>	<b>11.33</b>	<b>0.03</b>	<b>0.30</b>	<b>0.28</b>	<b>2,764.45</b>
Other Sources (Unmitigated)	1.16	3.87	5.32	1.83	229.10	48.05	1,628.73
Emissions Reduction from APM-2 <sup>c</sup>	0.00	0.00	0.00	0.00	174.71	41.71	0.00
<b>Other Sources (Mitigated)</b>	<b>1.16</b>	<b>3.87</b>	<b>5.32</b>	<b>1.83</b>	<b>54.39</b>	<b>6.34</b>	<b>1,628.73</b>
<b>Total Emissions (Mitigated)</b>	<b>2.95</b>	<b>11.01</b>	<b>16.65</b>	<b>1.86</b>	<b>54.69</b>	<b>6.61</b>	<b>4,393.18</b>

<sup>a</sup> Maximum annual emissions are during months 1 through 12

<sup>b</sup> Percentage reductions that would be achieved by using equipment with engines that meet Tier 3 emission standards instead of Tier 2 emission standards.

Percentages from TABLE II - OFF-ROAD ENGINE EMISSION RATES & COMPARISON OF UNCONTROLLED TO TIERED RATES AND TIERED TO TIERED RATES,  
 Downloaded from [http://www.aqmd.gov/ceqa/handbook/mitigation/offroad/MM\\_offroad.html](http://www.aqmd.gov/ceqa/handbook/mitigation/offroad/MM_offroad.html)

<sup>c</sup> Emission reductions from watering to maintain a soil moisture content of 10 percent during soil handling, grading, bulldozing and scraping  
 and limiting speeds on unpaved roads to 15 mph

**Table 4**  
**Operational Emissions on BLM Land**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Motor Vehicle Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	16.61
Motor Vehicle Fugitive PM	--	--	--	--	9.13	0.92	
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>9.14</b>	<b>0.92</b>	<b>16.61</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	--
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.01</b>

<sup>a</sup> Annual Emissions [tons] = Hourly Emissions [lb/hr] x Operating Time [hr/year]

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	1	N/A	6
1-Ton Crew Cab, 4x4, Transmission	1	2	N/A	16

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
1-Ton Crew Cab, 4x4, Gale-Pisgah	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab, 4x4, Transmission	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
1-Ton Crew Cab, 4x4, Gale-Pisgah	0.00	0.00	0.01	0.00	0.00	0.00	4.30	0.00	0.00	4.35
1-Ton Crew Cab, 4x4, Transmission	0.00	0.01	0.02	0.00	0.00	0.00	12.11	0.00	0.00	12.26
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>16.41</b>	<b>0.00</b>	<b>0.00</b>	<b>16.61</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
1-Ton Crew Cab, 4x4, Gale-Pisgah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 4  
Operational Emissions on BLM Land**

1-Ton Crew Cab, 4x4, Transmission	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	Paved	6	1	0.003	0.001	0.02	0.00	0.00	0.00
1-Ton Crew Cab, 4x4, Transmission	1	Unpaved	16	2	0.564	0.056	9.12	0.91	0.01	0.00
<b>Total</b>							<b>9.13</b>	<b>0.92</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]



**Table 5**

**Total Construction Emissions Summary - Controlled Fugitive PM**

**Total Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>										
Survey	0.00	0.00	0.00	0.00	0.03	0.00	0.68	1.00	0.00	0.00
Grading	1.16	4.78	12.23	0.02	15.98	4.29	2,203.85	1.00	0.00	0.00
Perimeter Wall	0.10	0.59	0.79	0.00	0.55	0.09	273.61	1.00	0.00	0.00
Water Well	0.02	0.16	0.14	0.00	0.25	0.03	70.96	1.00	0.00	0.00
Civil	0.18	1.13	4.69	0.01	11.45	1.35	1,026.29	1.00	0.00	0.00
Electrical	0.05	0.29	0.34	0.00	0.18	0.04	61.27	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.09	0.01	7.43	1.00	0.00	0.00
MEER	0.01	0.11	0.04	0.00	0.18	0.03	18.75	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.05	0.01	3.32	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.05	0.01	5.75	1.00	0.00	0.00
Asphalting	0.13	0.55	1.93	0.00	2.92	0.37	366.55	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>										
Survey	0.00	0.02	0.00	0.00	0.10	0.01	2.28	0.00	1.00	0.00
Civil	0.81	4.62	6.13	0.02	4.21	0.69	1,942.48	0.00	1.00	0.00
Electrical	0.19	1.41	1.36	0.00	0.70	0.18	246.08	0.00	0.67	0.67
Wiring	0.00	0.09	0.01	0.00	0.13	0.02	13.18	0.00	0.67	0.67
Control Room	0.01	0.14	0.06	0.00	0.20	0.03	24.75	0.00	0.67	0.67
Maintenance	0.00	0.06	0.01	0.00	0.12	0.02	8.29	0.00	0.67	0.67
Asphalting	0.10	0.41	1.11	0.00	1.01	0.14	188.30	0.00	0.00	1.00
Transformer Assembly	0.11	0.56	0.83	0.00	0.24	0.06	137.54	0.00	0.67	0.67
Testing	0.00	0.10	0.01	0.00	0.12	0.02	14.79	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>										
Overhead Construction	0.00	0.03	0.04	0.00	0.02	0.00	13.31	1.00	0.00	0.00
Underground Civil Construction	0.01	0.03	0.05	0.00	0.02	0.00	11.87	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.02	0.00	7.70	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	1.00	0.00	0.00
Civil	0.11	0.65	0.78	0.00	0.10	0.05	184.00	1.00	0.00	0.00
Electrical	0.06	0.34	0.50	0.00	0.08	0.04	84.18	1.00	0.00	0.00
Wiring	0.00	0.02	0.00	0.00	0.01	0.00	2.49	1.00	0.00	0.00
MEER	0.01	0.06	0.04	0.00	0.03	0.01	12.10	1.00	0.00	0.00

**Table 5**

**Total Construction Emissions Summary - Controlled Fugitive PM**

**Total Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	1.00	0.00	0.00
Civil	0.20	1.17	1.37	0.00	0.19	0.09	342.12	1.00	0.00	0.00
Electrical	0.09	0.52	0.71	0.00	0.13	0.06	124.34	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.04	0.01	7.40	1.00	0.00	0.00
Control Room	0.01	0.07	0.05	0.00	0.03	0.01	14.83	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	1.00	0.00	0.00
Transformer Assembly	0.08	0.48	0.60	0.00	0.10	0.04	103.59	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>										
Survey	0.01	0.16	0.02	0.00	2.00	0.21	22.68	1.00	0.00	0.00
Construction and Materials Yards	3.60	16.40	31.77	0.07	5.19	1.93	6,520.20	0.40	0.40	0.40
Right-of-Way Clearing	0.43	1.69	3.34	0.01	7.38	1.74	663.30	1.00	0.00	0.00
Roads and Landing Work	0.99	3.85	7.73	0.02	15.41	3.25	1,537.43	1.00	0.00	0.00
Retaining Wall Installation	0.64	3.27	5.57	0.01	20.75	2.28	1,242.25	1.00	0.00	0.00
Wet Crossing Installation	0.63	3.24	5.62	0.01	22.39	2.46	1,131.31	1.00	0.00	0.00
Guard Structure Installation	0.26	1.32	2.17	0.01	8.88	0.97	549.64	0.40	0.40	0.40
Remove Existing Conductor & GW	0.82	3.93	8.70	0.02	30.12	3.30	1,866.29	0.40	0.40	0.40
Shoo-fly Pole Haul	0.01	0.03	0.05	0.00	0.25	0.03	9.45	0.40	0.40	0.40
Install Shoo-fly Pole	0.03	0.18	0.28	0.00	0.74	0.08	62.47	0.40	0.40	0.40
Shoo-fly Pole Assembly	0.01	0.05	0.06	0.00	0.49	0.05	12.24	0.40	0.40	0.40
LST Removal	0.75	3.27	5.74	0.01	10.42	1.31	965.89	0.40	0.40	0.40
LST Foundation Removal	0.18	0.88	1.30	0.00	2.17	0.28	305.44	0.40	0.40	0.40
Install LST Foundations	1.50	7.00	14.24	0.37	100.91	10.59	3,847.35	0.40	0.40	0.40
LST Steel Haul	0.68	1.57	4.53	1.46	9.12	1.05	1,153.35	0.40	0.40	0.40
LST Steel Assembly	4.81	19.86	34.12	5.30	34.51	5.00	7,123.61	0.40	0.40	0.40
LST Erection	7.33	16.00	32.95	9.49	44.81	5.65	7,429.85	0.40	0.40	0.40
Install TSP Foundations	1.12	5.35	10.27	0.03	67.77	7.14	2,694.49	0.40	0.40	0.40
TSP Haul	0.05	0.22	0.42	0.00	3.36	0.35	82.65	0.40	0.40	0.40
TSP Assembly	0.09	0.49	0.73	0.00	4.00	0.44	137.31	0.40	0.40	0.40

**Table 5**

**Total Construction Emissions Summary - Controlled Fugitive PM**

**Total Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
TSP Erection	0.09	0.49	0.70	0.00	2.88	0.33	130.79	0.40	0.40	0.40
Install/Transfer Conductor	5.48	19.51	23.94	2.55	48.76	6.21	6,428.40	0.40	0.40	0.40
Shoo-fly Pole Removal	0.01	0.05	0.11	0.00	0.39	0.04	21.16	0.40	0.40	0.40
Remove Shoo-fly Conductor & GW	0.05	0.25	0.57	0.00	2.35	0.25	118.12	0.40	0.40	0.40
Guard Structure Removal	0.28	1.39	2.33	0.00	11.26	1.23	420.43	0.40	0.40	0.40
115 kV Pole Removal	0.02	0.09	0.19	0.00	0.64	0.07	35.15	0.40	0.40	0.40
Install TSP Riser Foundations	0.08	0.42	0.82	0.00	7.05	0.74	212.32	0.40	0.40	0.40
TSP Riser Haul	0.00	0.02	0.04	0.00	0.34	0.04	8.27	0.40	0.40	0.40
TSP Riser Assembly	0.00	0.02	0.04	0.00	0.34	0.04	8.27	0.40	0.40	0.40
TSP Riser Erection	0.05	0.27	0.39	0.00	1.60	0.18	72.66	0.40	0.40	0.40
Vault Installation	0.04	0.23	0.34	0.00	2.69	0.29	71.30	0.40	0.40	0.40
Duct Bank Installation	0.02	0.15	0.18	0.00	3.08	0.32	39.99	0.40	0.40	0.40
Install Underground Cable	0.06	0.30	0.69	0.00	3.27	0.35	152.12	0.40	0.40	0.40
Restoration	0.18	1.24	1.24	0.00	5.38	1.07	207.60	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 1)</b>										
Install Cable	0.02	0.12	0.27	0.00	0.17	0.03	55.61	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	1.00	0.00	0.00
Underground Conduit and Structures	0.00	0.02	0.04	0.00	0.07	0.01	10.32	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>										
Install Cable	0.01	0.06	0.14	0.00	0.09	0.01	27.80	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.03	0.00	0.05	0.01	6.56	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>										
Install Cable	0.02	0.10	0.23	0.00	0.08	0.02	46.14	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.04	0.00	0.04	0.01	10.26	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>										
Install Cable	0.03	0.14	0.29	0.00	0.09	0.02	60.35	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.04	0.01	13.10	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>										
Install Cable	0.02	0.09	0.18	0.00	0.06	0.01	37.72	0.00	0.00	1.00

**Table 5**

**Total Construction Emissions Summary - Controlled Fugitive PM**

**Total Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.03	0.01	11.63	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>										
Install 5 Foot Crossarm	0.01	0.07	0.12	0.00	0.15	0.02	27.70	1.00	0.00	0.00
Install Down Guys	0.00	0.02	0.02	0.00	0.03	0.00	4.93	1.00	0.00	0.00
Install Cable	0.03	0.14	0.32	0.00	0.20	0.03	64.46	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.02	0.00	0.72	1.00	0.00	0.00
Underground Conduit from Pole to Pole	0.00	0.02	0.03	0.00	0.05	0.01	8.57	1.00	0.00	0.00
Restoration	0.00	0.01	0.00	0.00	0.05	0.01	2.02	1.00	0.00	0.00
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>										
Install 5 Foot Crossarm	0.02	0.09	0.19	0.00	0.02	0.01	39.90	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.09	0.17	0.00	0.02	0.01	41.02	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.01	0.00	3.93	1.00	0.00	0.00
Install Cable	0.01	0.08	0.17	0.00	0.02	0.01	36.10	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.02	0.00	0.00	0.02	0.00	3.53	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.06	0.09	0.00	0.02	0.01	22.55	1.00	0.00	0.00
Restoration	0.00	0.02	0.01	0.00	0.01	0.00	3.69	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>										
All	0.01	0.08	0.09	0.00	0.02	0.01	27.81	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>										
Months 1-12	16.06	64.26	119.29	7.83	264.40	35.99	26,107.52			
Months 13-24	12.12	46.95	79.56	7.75	171.88	20.95	18,573.43			
Months 19-30	11.50	43.22	75.54	7.73	169.08	20.48	17,031.90			
<b>12-Month Maximum</b>	<b>16.06</b>	<b>64.26</b>	<b>119.29</b>	<b>7.83</b>	<b>264.40</b>	<b>35.99</b>	<b>26,107.52</b>			
<b>Total GHG Emissions (metric tons)</b>							<b>48,440.17</b>			

**Table 6**  
**Total Off-Road Construction Equipment Emissions Summary - Uncontrolled**

**Total Off-Road Construction Equipment Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Grading	1.06	3.88	8.46	0.01	0.32	0.30	1,360.58	1.00	0.00	0.00
Perimeter Wall	0.09	0.47	0.63	0.00	0.02	0.02	228.32	1.00	0.00	0.00
Water Well	0.02	0.11	0.12	0.00	0.00	0.00	62.74	1.00	0.00	0.00
Civil	0.06	0.33	0.43	0.00	0.02	0.02	97.48	1.00	0.00	0.00
Electrical	0.04	0.19	0.33	0.00	0.02	0.02	46.84	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Asphalting	0.09	0.32	0.76	0.00	0.03	0.03	109.57	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
Civil	0.77	4.00	5.00	0.02	0.22	0.20	1,647.56	0.00	1.00	0.00
Electrical	0.18	0.94	1.31	0.00	0.08	0.08	180.29	0.00	0.67	0.67
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	0.00	0.67	0.67
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67
Asphalting	0.09	0.32	0.76	0.00	0.03	0.03	109.57	0.00	0.00	1.00
Transformer Assembly	0.10	0.45	0.82	0.00	0.04	0.03	122.66	0.00	0.67	0.67
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>										
Overhead Construction	0.00	0.02	0.04	0.00	0.00	0.00	12.68	1.00	0.00	0.00
Underground Civil Construction	0.01	0.02	0.04	0.00	0.00	0.00	10.39	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.00	0.00	7.27	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Civil	0.11	0.57	0.73	0.00	0.04	0.04	163.64	1.00	0.00	0.00
Electrical	0.06	0.26	0.49	0.00	0.02	0.02	72.67	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	1.00	0.00	0.00

**Table 6**  
**Total Off-Road Construction Equipment Emissions Summary - Uncontrolled**

**Total Off-Road Construction Equipment Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Civil	0.19	1.01	1.27	0.00	0.07	0.06	304.10	1.00	0.00	0.00
Electrical	0.09	0.38	0.70	0.00	0.03	0.03	103.81	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Transformer Assembly	0.08	0.37	0.59	0.00	0.03	0.03	88.72	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Construction and Materials Yards	3.31	10.95	25.97	0.05	0.92	0.84	4,736.74	0.40	0.40	0.40
Right-of-Way Clearing	0.42	1.50	3.22	0.01	0.12	0.11	617.85	1.00	0.00	0.00
Roads and Landing Work	0.97	3.38	7.50	0.01	0.27	0.25	1,436.65	1.00	0.00	0.00
Retaining Wall Installation	0.61	2.73	4.65	0.01	0.18	0.16	997.93	1.00	0.00	0.00
Wet Crossing Installation	0.59	2.57	4.55	0.01	0.17	0.16	841.55	1.00	0.00	0.00
Guard Structure Installation	0.25	1.10	1.97	0.00	0.08	0.07	483.08	0.40	0.40	0.40
Remove Existing Conductor & GW	0.78	3.18	7.99	0.02	0.25	0.23	1,627.74	0.40	0.40	0.40
Shoo-fly Pole Haul	0.01	0.02	0.04	0.00	0.00	0.00	7.27	0.40	0.40	0.40
Install Shoo-fly Pole	0.03	0.15	0.26	0.00	0.01	0.01	55.01	0.40	0.40	0.40
Shoo-fly Pole Assembly	0.01	0.02	0.04	0.00	0.00	0.00	6.95	0.40	0.40	0.40
LST Removal	0.73	2.80	5.51	0.01	0.27	0.25	860.65	0.40	0.40	0.40
LST Foundation Removal	0.17	0.64	1.23	0.00	0.05	0.05	263.68	0.40	0.40	0.40
Install LST Foundations	1.25	5.10	9.09	0.03	0.30	0.28	2,580.73	0.40	0.40	0.40
LST Steel Haul	0.19	0.63	1.62	0.00	0.05	0.05	311.11	0.40	0.40	0.40
LST Steel Assembly	3.08	13.89	23.24	0.04	1.12	1.03	3,738.95	0.40	0.40	0.40
LST Erection	1.46	5.29	11.52	0.02	0.51	0.47	1,824.50	0.40	0.40	0.40
Install TSP Foundations	1.02	4.00	7.49	0.02	0.25	0.23	1,988.88	0.40	0.40	0.40
TSP Haul	0.04	0.14	0.34	0.00	0.01	0.01	58.12	0.40	0.40	0.40
TSP Assembly	0.09	0.34	0.67	0.00	0.03	0.03	105.03	0.40	0.40	0.40

**Table 6**

**Total Off-Road Construction Equipment Emissions Summary - Uncontrolled**

**Total Off-Road Construction Equipment Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
TSP Erection	0.09	0.34	0.67	0.00	0.03	0.03	105.03	0.40	0.40	0.40
Install/Transfer Conductor	2.23	8.36	19.92	0.04	0.67	0.62	3,894.68	0.40	0.40	0.40
Shoo-fly Pole Removal	0.01	0.05	0.10	0.00	0.00	0.00	18.51	0.40	0.40	0.40
Remove Shoo-fly Conductor & GW	0.05	0.20	0.51	0.00	0.02	0.01	100.47	0.40	0.40	0.40
Guard Structure Removal	0.27	1.09	2.19	0.00	0.10	0.09	355.29	0.40	0.40	0.40
115 kV Pole Removal	0.02	0.08	0.17	0.00	0.01	0.01	30.66	0.40	0.40	0.40
Install TSP Riser Foundations	0.07	0.26	0.49	0.00	0.02	0.02	129.98	0.40	0.40	0.40
TSP Riser Haul	0.00	0.01	0.03	0.00	0.00	0.00	5.81	0.40	0.40	0.40
TSP Riser Assembly	0.00	0.01	0.03	0.00	0.00	0.00	5.81	0.40	0.40	0.40
TSP Riser Erection	0.05	0.19	0.37	0.00	0.02	0.02	58.35	0.40	0.40	0.40
Vault Installation	0.03	0.17	0.26	0.00	0.01	0.01	48.27	0.40	0.40	0.40
Duct Bank Installation	0.01	0.10	0.10	0.00	0.01	0.01	16.08	0.40	0.40	0.40
Install Underground Cable	0.06	0.25	0.61	0.00	0.02	0.02	128.91	0.40	0.40	0.40
Restoration	0.17	1.01	1.16	0.00	0.08	0.08	162.73	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 1)</b>										
Install Cable	0.02	0.10	0.27	0.00	0.01	0.01	51.49	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Underground Conduit and Structures	0.00	0.02	0.03	0.00	0.00	0.00	7.62	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>										
Install Cable	0.01	0.05	0.13	0.00	0.00	0.00	25.75	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.01	0.02	0.00	0.00	0.00	4.85	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>										
Install Cable	0.02	0.08	0.22	0.00	0.01	0.01	42.91	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.03	0.00	0.00	0.00	7.62	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>										
Install Cable	0.02	0.10	0.28	0.00	0.01	0.01	54.93	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.70	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>										
Install Cable	0.02	0.07	0.18	0.00	0.01	0.00	34.33	0.00	0.00	1.00

**Table 6**  
**Total Off-Road Construction Equipment Emissions Summary - Uncontrolled**

**Total Off-Road Construction Equipment Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.00	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>										
Install 5 Foot Crossarm	0.01	0.04	0.12	0.00	0.00	0.00	22.31	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.00	0.00	3.43	1.00	0.00	0.00
Install Cable	0.03	0.11	0.31	0.00	0.01	0.01	60.08	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Underground Conduit from Pole to Pole	0.00	0.01	0.03	0.00	0.00	0.00	6.23	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>										
Install 5 Foot Crossarm	0.02	0.07	0.18	0.00	0.01	0.00	34.33	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.07	0.16	0.00	0.00	0.00	36.98	1.00	0.00	0.00
Install Down Guys	0.00	0.00	0.01	0.00	0.00	0.00	2.57	1.00	0.00	0.00
Install Cable	0.01	0.06	0.16	0.00	0.00	0.00	30.90	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.04	0.08	0.00	0.00	0.00	17.32	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>										
All	0.01	0.08	0.09	0.00	0.02	0.01	27.81	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>										
Months 1-12	10.78	42.51	85.10	0.17	3.33	3.05	16,301.45			
Months 13-24	7.21	29.36	56.22	0.12	2.26	2.08	11,383.55			
Months 19-30	6.61	26.05	52.93	0.10	2.10	1.93	10,034.64			
<b>12-Month Maximum</b>	<b>10.78</b>	<b>42.51</b>	<b>85.10</b>	<b>0.17</b>	<b>3.33</b>	<b>3.05</b>	<b>16,301.45</b>			
<b>Total GHG Emissions (metric tons)</b>							<b>29,800.87</b>			



**Table 7  
Total Construction Emissions Summary - Controlled Fugitive PM**

**Total Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>											
Survey	0.00	0.00	0.00	0.00	0.03	0.00	0.68	0.000	1.00	0.00	0.00
Grading	1.16	4.78	12.23	0.02	15.98	4.29	2,203.85	0.000	1.00	0.00	0.00
Perimeter Wall	0.10	0.59	0.79	0.00	0.55	0.09	273.61	0.000	1.00	0.00	0.00
Water Well	0.02	0.16	0.14	0.00	0.25	0.03	70.96	0.000	1.00	0.00	0.00
Civil	0.18	1.13	4.69	0.01	11.45	1.35	1,026.29	0.000	1.00	0.00	0.00
Electrical	0.05	0.29	0.34	0.00	0.18	0.04	61.27	0.000	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.09	0.01	7.43	0.000	1.00	0.00	0.00
MEER	0.01	0.11	0.04	0.00	0.18	0.03	18.75	0.000	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.05	0.01	3.32	0.000	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.05	0.01	5.75	0.000	1.00	0.00	0.00
Asphalting	0.13	0.55	1.93	0.00	2.92	0.37	366.55	0.000	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>											
Survey	0.00	0.02	0.00	0.00	0.10	0.01	2.28	0.000	0.00	1.00	0.00
Civil	0.81	4.62	6.13	0.02	4.21	0.69	1,942.48	0.000	0.00	1.00	0.00
Electrical	0.19	1.41	1.36	0.00	0.70	0.18	246.08	0.000	0.00	0.67	0.67
Wiring	0.00	0.09	0.01	0.00	0.13	0.02	13.18	0.000	0.00	0.67	0.67
Control Room	0.01	0.14	0.06	0.00	0.20	0.03	24.75	0.000	0.00	0.67	0.67
Maintenance	0.00	0.06	0.01	0.00	0.12	0.02	8.29	0.000	0.00	0.67	0.67
Asphalting	0.10	0.41	1.11	0.00	1.01	0.14	188.30	0.000	0.00	0.00	1.00
Transformer Assembly	0.11	0.56	0.83	0.00	0.24	0.06	137.54	0.000	0.00	0.67	0.67
Testing	0.00	0.10	0.01	0.00	0.12	0.02	14.79	0.000	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>											
Overhead Construction	0.00	0.03	0.04	0.00	0.02	0.00	13.31	0.000	1.00	0.00	0.00
Underground Civil Construction	0.01	0.03	0.05	0.00	0.02	0.00	11.87	0.000	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.02	0.00	7.70	0.000	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.000	1.00	0.00	0.00
Civil	0.11	0.65	0.78	0.00	0.10	0.05	184.00	0.000	1.00	0.00	0.00
Electrical	0.06	0.34	0.50	0.00	0.08	0.04	84.18	0.000	1.00	0.00	0.00
Wiring	0.00	0.02	0.00	0.00	0.01	0.00	2.49	0.000	1.00	0.00	0.00
MEER	0.01	0.06	0.04	0.00	0.03	0.01	12.10	0.000	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	0.000	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	0.000	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>											

**Table 7**  
**Total Construction Emissions Summary - Controlled Fugitive PM**

**Total Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.000	1.00	0.00	0.00
Civil	0.20	1.17	1.37	0.00	0.19	0.09	342.12	0.000	1.00	0.00	0.00
Electrical	0.09	0.52	0.71	0.00	0.13	0.06	124.34	0.000	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.04	0.01	7.40	0.000	1.00	0.00	0.00
Control Room	0.01	0.07	0.05	0.00	0.03	0.01	14.83	0.000	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	0.000	1.00	0.00	0.00
Transformer Assembly	0.08	0.48	0.60	0.00	0.10	0.04	103.59	0.000	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	0.000	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>											
Survey	0.01	0.16	0.02	0.00	2.00	0.21	22.68	0.240	1.00	0.00	0.00
Construction and Materials Yards	3.60	16.40	31.77	0.07	5.19	1.93	6,520.20	0.000	0.40	0.40	0.40
Right-of-Way Clearing	0.43	1.69	3.34	0.01	7.38	1.74	663.30	0.240	1.00	0.00	0.00
Roads and Landing Work	0.99	3.85	7.73	0.02	15.41	3.25	1,537.43	0.240	1.00	0.00	0.00
Retaining Wall Installation	0.64	3.27	5.57	0.01	20.75	2.28	1,242.25	0.240	1.00	0.00	0.00
Wet Crossing Installation	0.63	3.24	5.62	0.01	22.39	2.46	1,131.31	0.240	1.00	0.00	0.00
Guard Structure Installation	0.26	1.32	2.17	0.01	8.88	0.97	549.64	0.240	0.40	0.40	0.40
Remove Existing Conductor & GW	0.82	3.93	8.70	0.02	30.12	3.30	1,866.29	0.240	0.40	0.40	0.40
Shoo-fly Pole Haul	0.01	0.03	0.05	0.00	0.25	0.03	9.45	0.240	0.40	0.40	0.40
Install Shoo-fly Pole	0.03	0.18	0.28	0.00	0.74	0.08	62.47	0.240	0.40	0.40	0.40
Shoo-fly Pole Assembly	0.01	0.05	0.06	0.00	0.49	0.05	12.24	0.240	0.40	0.40	0.40
LST Removal	0.75	3.27	5.74	0.01	10.42	1.31	965.89	0.240	0.40	0.40	0.40
LST Foundation Removal	0.18	0.88	1.30	0.00	2.17	0.28	305.44	0.240	0.40	0.40	0.40
Install LST Foundations	1.50	7.00	14.24	0.37	100.91	10.59	3,847.35	0.240	0.40	0.40	0.40
LST Steel Haul	0.68	1.57	4.53	1.46	9.12	1.05	1,153.35	0.240	0.40	0.40	0.40
LST Steel Assembly	4.81	19.86	34.12	5.30	34.51	5.00	7,123.61	0.240	0.40	0.40	0.40
LST Erection	7.33	16.00	32.95	9.49	44.81	5.65	7,429.85	0.240	0.40	0.40	0.40
Install TSP Foundations	1.12	5.35	10.27	0.03	67.77	7.14	2,694.49	0.240	0.40	0.40	0.40
TSP Haul	0.05	0.22	0.42	0.00	3.36	0.35	82.65	0.240	0.40	0.40	0.40
TSP Assembly	0.09	0.49	0.73	0.00	4.00	0.44	137.31	0.240	0.40	0.40	0.40
TSP Erection	0.09	0.49	0.70	0.00	2.88	0.33	130.79	0.240	0.40	0.40	0.40
Install/Transfer Conductor	5.48	19.51	23.94	2.55	48.76	6.21	6,428.40	0.240	0.40	0.40	0.40
Shoo-fly Pole Removal	0.01	0.05	0.11	0.00	0.39	0.04	21.16	0.240	0.40	0.40	0.40
Remove Shoo-fly Conductor & GW	0.05	0.25	0.57	0.00	2.35	0.25	118.12	0.240	0.40	0.40	0.40
Guard Structure Removal	0.28	1.39	2.33	0.00	11.26	1.23	420.43	0.240	0.40	0.40	0.40
115 kV Pole Removal	0.02	0.09	0.19	0.00	0.64	0.07	35.15	0.240	0.40	0.40	0.40

**Table 7  
Total Construction Emissions Summary - Controlled Fugitive PM**

**Total Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Install TSP Riser Foundations	0.08	0.42	0.82	0.00	7.05	0.74	212.32	0.240	0.40	0.40	0.40
TSP Riser Haul	0.00	0.02	0.04	0.00	0.34	0.04	8.27	0.240	0.40	0.40	0.40
TSP Riser Assembly	0.00	0.02	0.04	0.00	0.34	0.04	8.27	0.240	0.40	0.40	0.40
TSP Riser Erection	0.05	0.27	0.39	0.00	1.60	0.18	72.66	0.240	0.40	0.40	0.40
Vault Installation	0.04	0.23	0.34	0.00	2.69	0.29	71.30	0.240	0.40	0.40	0.40
Duct Bank Installation	0.02	0.15	0.18	0.00	3.08	0.32	39.99	0.240	0.40	0.40	0.40
Install Underground Cable	0.06	0.30	0.69	0.00	3.27	0.35	152.12	0.240	0.40	0.40	0.40
Restoration	0.18	1.24	1.24	0.00	5.38	1.07	207.60	0.240	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 1)</b>											
Install Cable	0.02	0.12	0.27	0.00	0.17	0.03	55.61	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.000	1.00	0.00	0.00
Underground Conduit and Structures	0.00	0.02	0.04	0.00	0.07	0.01	10.32	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>											
Install Cable	0.01	0.06	0.14	0.00	0.09	0.01	27.80	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.03	0.00	0.05	0.01	6.56	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>											
Install Cable	0.02	0.10	0.23	0.00	0.08	0.02	46.14	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.04	0.00	0.04	0.01	10.26	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>											
Install Cable	0.03	0.14	0.29	0.00	0.09	0.02	60.35	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.04	0.01	13.10	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>											
Install Cable	0.02	0.09	0.18	0.00	0.06	0.01	37.72	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.03	0.01	11.63	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>											
Install 5 Foot Crossarm	0.01	0.07	0.12	0.00	0.15	0.02	27.70	0.000	1.00	0.00	0.00
Install Down Guys	0.00	0.02	0.02	0.00	0.03	0.00	4.93	0.000	1.00	0.00	0.00
Install Cable	0.03	0.14	0.32	0.00	0.20	0.03	64.46	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.02	0.00	0.72	0.000	1.00	0.00	0.00
Underground Conduit from Pole to Pole	0.00	0.02	0.03	0.00	0.05	0.01	8.57	0.000	1.00	0.00	0.00
Restoration	0.00	0.01	0.00	0.00	0.05	0.01	2.02	0.000	1.00	0.00	0.00

**Table 7  
Total Construction Emissions Summary - Controlled Fugitive PM**

**Total Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>											
Install 5 Foot Crossarm	0.02	0.09	0.19	0.00	0.02	0.01	39.90	0.198	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.09	0.17	0.00	0.02	0.01	41.02	0.198	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.01	0.00	3.93	0.198	1.00	0.00	0.00
Install Cable	0.01	0.08	0.17	0.00	0.02	0.01	36.10	0.198	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.02	0.00	0.00	0.02	0.00	3.53	0.198	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.06	0.09	0.00	0.02	0.01	22.55	0.198	1.00	0.00	0.00
Restoration	0.00	0.02	0.01	0.00	0.01	0.00	3.69	0.198	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>											
All	0.01	0.08	0.09	0.00	0.02	0.01	27.81	0.000	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>											
Months 1-12	2.95	11.01	19.48	1.86	54.94	6.84	4,393.18				
Months 13-24	2.32	8.20	14.21	1.85	39.47	4.62	3,293.44				
Months 19-30	2.32	8.20	14.21	1.85	39.47	4.62	3,293.44				
<b>12-Month Maximum</b>	<b>2.95</b>	<b>11.01</b>	<b>19.48</b>	<b>1.86</b>	<b>54.94</b>	<b>6.84</b>	<b>4,393.18</b>				
<b>Total GHG Emissions (metric tons)</b>							<b>48,440.17</b>				

**Table 8**  
**Total Off-Road Construction Equipment Emissions Summary - Uncontrolled**

**Total Off-Road Construction Equipment Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Grading	1.06	3.88	8.46	0.01	0.32	0.30	1,360.58	0.000	1.00	0.00	0.00
Perimeter Wall	0.09	0.47	0.63	0.00	0.02	0.02	228.32	0.000	1.00	0.00	0.00
Water Well	0.02	0.11	0.12	0.00	0.00	0.00	62.74	0.000	1.00	0.00	0.00
Civil	0.06	0.33	0.43	0.00	0.02	0.02	97.48	0.000	1.00	0.00	0.00
Electrical	0.04	0.19	0.33	0.00	0.02	0.02	46.84	0.000	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	0.000	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Asphalting	0.09	0.32	0.76	0.00	0.03	0.03	109.57	0.000	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	1.00	0.00
Civil	0.77	4.00	5.00	0.02	0.22	0.20	1,647.56	0.000	0.00	1.00	0.00
Electrical	0.18	0.94	1.31	0.00	0.08	0.08	180.29	0.000	0.00	0.67	0.67
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.67	0.67
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	0.000	0.00	0.67	0.67
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.67	0.67
Asphalting	0.09	0.32	0.76	0.00	0.03	0.03	109.57	0.000	0.00	0.00	1.00
Transformer Assembly	0.10	0.45	0.82	0.00	0.04	0.03	122.66	0.000	0.00	0.67	0.67
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>											
Overhead Construction	0.00	0.02	0.04	0.00	0.00	0.00	12.68	0.000	1.00	0.00	0.00
Underground Civil Construction	0.01	0.02	0.04	0.00	0.00	0.00	10.39	0.000	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.00	0.00	7.27	0.000	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Civil	0.11	0.57	0.73	0.00	0.04	0.04	163.64	0.000	1.00	0.00	0.00
Electrical	0.06	0.26	0.49	0.00	0.02	0.02	72.67	0.000	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	0.000	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>											

**Table 8**  
**Total Off-Road Construction Equipment Emissions Summary - Uncontrolled**

**Total Off-Road Construction Equipment Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Civil	0.19	1.01	1.27	0.00	0.07	0.06	304.10	0.000	1.00	0.00	0.00
Electrical	0.09	0.38	0.70	0.00	0.03	0.03	103.81	0.000	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	0.000	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Transformer Assembly	0.08	0.37	0.59	0.00	0.03	0.03	88.72	0.000	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.240	1.00	0.00	0.00
Construction and Materials Yards	3.31	10.95	25.97	0.05	0.92	0.84	4,736.74	0.000	0.40	0.40	0.40
Right-of-Way Clearing	0.42	1.50	3.22	0.01	0.12	0.11	617.85	0.240	1.00	0.00	0.00
Roads and Landing Work	0.97	3.38	7.50	0.01	0.27	0.25	1,436.65	0.240	1.00	0.00	0.00
Retaining Wall Installation	0.61	2.73	4.65	0.01	0.18	0.16	997.93	0.240	1.00	0.00	0.00
Wet Crossing Installation	0.59	2.57	4.55	0.01	0.17	0.16	841.55	0.240	1.00	0.00	0.00
Guard Structure Installation	0.25	1.10	1.97	0.00	0.08	0.07	483.08	0.240	0.40	0.40	0.40
Remove Existing Conductor & GW	0.78	3.18	7.99	0.02	0.25	0.23	1,627.74	0.240	0.40	0.40	0.40
Shoo-fly Pole Haul	0.01	0.02	0.04	0.00	0.00	0.00	7.27	0.240	0.40	0.40	0.40
Install Shoo-fly Pole	0.03	0.15	0.26	0.00	0.01	0.01	55.01	0.240	0.40	0.40	0.40
Shoo-fly Pole Assembly	0.01	0.02	0.04	0.00	0.00	0.00	6.95	0.240	0.40	0.40	0.40
LST Removal	0.73	2.80	5.51	0.01	0.27	0.25	860.65	0.240	0.40	0.40	0.40
LST Foundation Removal	0.17	0.64	1.23	0.00	0.05	0.05	263.68	0.240	0.40	0.40	0.40
Install LST Foundations	1.25	5.10	9.09	0.03	0.30	0.28	2,580.73	0.240	0.40	0.40	0.40
LST Steel Haul	0.19	0.63	1.62	0.00	0.05	0.05	311.11	0.240	0.40	0.40	0.40
LST Steel Assembly	3.08	13.89	23.24	0.04	1.12	1.03	3,738.95	0.240	0.40	0.40	0.40
LST Erection	1.46	5.29	11.52	0.02	0.51	0.47	1,824.50	0.240	0.40	0.40	0.40
Install TSP Foundations	1.02	4.00	7.49	0.02	0.25	0.23	1,988.88	0.240	0.40	0.40	0.40
TSP Haul	0.04	0.14	0.34	0.00	0.01	0.01	58.12	0.240	0.40	0.40	0.40
TSP Assembly	0.09	0.34	0.67	0.00	0.03	0.03	105.03	0.240	0.40	0.40	0.40
TSP Erection	0.09	0.34	0.67	0.00	0.03	0.03	105.03	0.240	0.40	0.40	0.40
Install/Transfer Conductor	2.23	8.36	19.92	0.04	0.67	0.62	3,894.68	0.240	0.40	0.40	0.40
Shoo-fly Pole Removal	0.01	0.05	0.10	0.00	0.00	0.00	18.51	0.240	0.40	0.40	0.40
Remove Shoo-fly Conductor & GW	0.05	0.20	0.51	0.00	0.02	0.01	100.47	0.240	0.40	0.40	0.40
Guard Structure Removal	0.27	1.09	2.19	0.00	0.10	0.09	355.29	0.240	0.40	0.40	0.40
115 kV Pole Removal	0.02	0.08	0.17	0.00	0.01	0.01	30.66	0.240	0.40	0.40	0.40

**Table 8  
Total Off-Road Construction Equipment Emissions Summary - Uncontrolled**

**Total Off-Road Construction Equipment Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Install TSP Riser Foundations	0.07	0.26	0.49	0.00	0.02	0.02	129.98	0.240	0.40	0.40	0.40
TSP Riser Haul	0.00	0.01	0.03	0.00	0.00	0.00	5.81	0.240	0.40	0.40	0.40
TSP Riser Assembly	0.00	0.01	0.03	0.00	0.00	0.00	5.81	0.240	0.40	0.40	0.40
TSP Riser Erection	0.05	0.19	0.37	0.00	0.02	0.02	58.35	0.240	0.40	0.40	0.40
Vault Installation	0.03	0.17	0.26	0.00	0.01	0.01	48.27	0.240	0.40	0.40	0.40
Duct Bank Installation	0.01	0.10	0.10	0.00	0.01	0.01	16.08	0.240	0.40	0.40	0.40
Install Underground Cable	0.06	0.25	0.61	0.00	0.02	0.02	128.91	0.240	0.40	0.40	0.40
Restoration	0.17	1.01	1.16	0.00	0.08	0.08	162.73	0.240	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 1)</b>											
Install Cable	0.02	0.10	0.27	0.00	0.01	0.01	51.49	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Underground Conduit and Structures	0.00	0.02	0.03	0.00	0.00	0.00	7.62	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>											
Install Cable	0.01	0.05	0.13	0.00	0.00	0.00	25.75	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.01	0.02	0.00	0.00	0.00	4.85	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>											
Install Cable	0.02	0.08	0.22	0.00	0.01	0.01	42.91	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.03	0.00	0.00	0.00	7.62	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>											
Install Cable	0.02	0.10	0.28	0.00	0.01	0.01	54.93	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.70	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>											
Install Cable	0.02	0.07	0.18	0.00	0.01	0.00	34.33	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.00	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>											
Install 5 Foot Crossarm	0.01	0.04	0.12	0.00	0.00	0.00	22.31	0.000	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.00	0.00	3.43	0.000	1.00	0.00	0.00
Install Cable	0.03	0.11	0.31	0.00	0.01	0.01	60.08	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Underground Conduit from Pole to Pole	0.00	0.01	0.03	0.00	0.00	0.00	6.23	0.000	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00

**Table 8**  
**Total Off-Road Construction Equipment Emissions Summary - Uncontrolled**

**Total Off-Road Construction Equipment Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>											
Install 5 Foot Crossarm	0.02	0.07	0.18	0.00	0.01	0.00	34.33	0.198	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.07	0.16	0.00	0.00	0.00	36.98	0.198	1.00	0.00	0.00
Install Down Guys	0.00	0.00	0.01	0.00	0.00	0.00	2.57	0.198	1.00	0.00	0.00
Install Cable	0.01	0.06	0.16	0.00	0.00	0.00	30.90	0.198	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.198	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.04	0.08	0.00	0.00	0.00	17.32	0.198	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.198	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>											
All	0.01	0.08	0.09	0.00	0.02	0.01	27.81	0.000	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>											
Months 1-12	1.79	7.13	14.16	0.03	0.55	0.51	2,764.45				
Months 13-24	1.18	4.81	9.45	0.02	0.38	0.35	1,831.88				
Months 19-30	1.18	4.81	9.45	0.02	0.38	0.35	1,831.88				
<b>12-Month Maximum</b>	<b>1.79</b>	<b>7.13</b>	<b>14.16</b>	<b>0.03</b>	<b>0.55</b>	<b>0.51</b>	<b>2,764.45</b>				
<b>Total GHG Emissions (metric tons)</b>							<b>29,800.87</b>				



**Table 9  
Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM  
Grading**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	17.67	64.61	141.06	0.22	5.40	4.97	22,676.3
Onsite Motor Vehicle Exhaust	0.02	0.15	0.86	0.00	0.03	0.01	173.6
Onsite Motor Vehicle Fugitive PM	--	--	--	--	20.07	2.01	
Earthwork Fugitive PM	--	--	--	--	130.08	50.45	
<b>Onsite Total</b>	<b>17.69</b>	<b>64.75</b>	<b>141.92</b>	<b>0.22</b>	<b>155.57</b>	<b>57.44</b>	<b>22849.9</b>
Offsite Motor Vehicle Exhaust	1.72	14.93	61.89	0.14	2.10	1.12	13,880.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	119.29	14.08	
<b>Offsite Total</b>	<b>1.72</b>	<b>14.93</b>	<b>61.89</b>	<b>0.14</b>	<b>121.40</b>	<b>15.20</b>	<b>13880.9</b>
<b>Total</b>	<b>19.41</b>	<b>79.68</b>	<b>203.81</b>	<b>0.36</b>	<b>276.97</b>	<b>72.64</b>	<b>36730.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	1.06	3.88	8.46	0.01	0.32	0.30	1,360.6
Onsite Motor Vehicle Exhaust	0.00	0.01	0.05	0.00	0.00	0.00	10.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	1.20	0.12	
Earthwork Fugitive PM	--	--	--	--	7.80	3.03	
<b>Onsite Total</b>	<b>1.06</b>	<b>3.89</b>	<b>8.52</b>	<b>0.01</b>	<b>9.33</b>	<b>3.45</b>	<b>1371.0</b>
Offsite Motor Vehicle Exhaust	0.10	0.90	3.71	0.01	0.13	0.07	832.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	6.52	0.78	
<b>Offsite Total</b>	<b>0.10</b>	<b>0.90</b>	<b>3.71</b>	<b>0.01</b>	<b>6.64</b>	<b>0.85</b>	<b>832.9</b>
<b>Total</b>	<b>1.16</b>	<b>4.78</b>	<b>12.23</b>	<b>0.02</b>	<b>15.98</b>	<b>4.29</b>	<b>2203.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
980 Loader	400	2	120	10
Grader/Blade	400	2	120	10
Compactor	100	1	120	5
Earth Mover	400	4	120	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
980 Loader	400	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Grader/Blade	400	0.158	0.552	1.238	0.002	0.045	0.041	229.278	0.014	0.006	Graders
Compactor	100	0.079	0.397	0.511	0.001	0.042	0.038	58.936	0.007	0.002	Rollers
Earth Mover	400	0.273	1.010	2.216	0.003	0.085	0.078	321.140	0.025	0.008	Scrapers

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 9  
Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM  
Grading**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
980 Loader	3.18	11.18	25.12	0.05	0.90	0.83	4735.91	0.29	0.12	4,780.1
Grader/Blade	3.15	11.04	24.76	0.05	0.89	0.82	4585.56	0.28	0.12	4,628.5
Compactor	0.40	1.98	2.55	0.00	0.21	0.19	294.68	0.04	0.01	297.8
Earth Mover	10.94	40.40	88.63	0.13	3.40	3.13	12845.60	0.99	0.33	12,970.0
<b>Total</b>	<b>17.67</b>	<b>64.61</b>	<b>141.06</b>	<b>0.22</b>	<b>5.40</b>	<b>4.97</b>	<b>22461.76</b>	<b>1.59</b>	<b>0.58</b>	<b>22676.34</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
980 Loader	0.19	0.67	1.51	0.00	0.05	0.05	284.15	0.02	0.01	286.8
Grader/Blade	0.19	0.66	1.49	0.00	0.05	0.05	275.13	0.02	0.01	277.7
Compactor	0.02	0.12	0.15	0.00	0.01	0.01	17.68	0.00	0.00	17.9
Earth Mover	0.66	2.42	5.32	0.01	0.20	0.19	770.74	0.06	0.02	778.2
<b>Total</b>	<b>1.06</b>	<b>3.88</b>	<b>8.46</b>	<b>0.01</b>	<b>0.32</b>	<b>0.30</b>	<b>1347.71</b>	<b>0.10</b>	<b>0.04</b>	<b>1360.58</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Water Truck	4	120	N/A	4
Survey Truck	1	120	N/A	4
Soils Test Crew Truck	1	120	N/A	4
Dump Truck	60	120	N/A	0.5
<b>Offsite</b>				
Water Truck	4	120	N/A	27
Dump Truck	60	120	N/A	60
Worker Commute	15	120	N/A	58

<sup>a</sup> Dump trucks based on exporting 100,000 CY over 120 days and 14 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Survey Truck	LHDT	2.79E-04	1.93E-03	1.24E-02	1.10E-05	2.61E-04	5.48E-05	1.12E+00	1.29E-05	3.80E-05
Soils Test Crew Truck	LHDT	2.79E-04	1.93E-03	1.24E-02	1.10E-05	2.61E-04	5.48E-05	1.12E+00	1.29E-05	3.80E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
<b>Offsite</b>										

**Table 9  
Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM  
Grading**

Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Water Truck	0.01	0.05	0.26	0.00	0.01	0.00	56.64	0.00	0.00	57.25
Survey Truck	0.00	0.01	0.05	0.00	0.00	0.00	4.46	0.00	0.00	4.51
Soils Test Crew Truck	0.00	0.01	0.05	0.00	0.00	0.00	4.46	0.00	0.00	4.51
Dump Truck	0.01	0.09	0.50	0.00	0.02	0.01	106.21	0.00	0.00	107.34
<b>Onsite Total</b>	<b>0.02</b>	<b>0.15</b>	<b>0.86</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>171.77</b>	<b>0.00</b>	<b>0.01</b>	<b>173.61</b>
<b>Offsite</b>										
Water Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Dump Truck	1.52	10.25	59.62	0.13	1.95	1.08	12744.91	0.07	0.43	12881.09
Worker Commute	0.15	4.37	0.48	0.01	0.09	0.00	606.44	0.04	0.02	613.36
<b>Offsite Total</b>	<b>1.72</b>	<b>14.93</b>	<b>61.89</b>	<b>0.14</b>	<b>2.10</b>	<b>1.12</b>	<b>13733.70</b>	<b>0.11</b>	<b>0.47</b>	<b>13880.88</b>
<b>Total</b>	<b>1.74</b>	<b>15.08</b>	<b>62.75</b>	<b>0.14</b>	<b>2.13</b>	<b>1.13</b>	<b>13905.47</b>	<b>0.11</b>	<b>0.47</b>	<b>14054.49</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.40	0.00	0.00	3.43
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
Soils Test Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
Dump Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.37	0.00	0.00	6.44
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.31</b>	<b>0.00</b>	<b>0.00</b>	<b>10.42</b>
<b>Offsite</b>										
Water Truck	0.00	0.02	0.11	0.00	0.00	0.00	22.94	0.00	0.00	23.19
Dump Truck	0.09	0.62	3.58	0.01	0.12	0.07	764.69	0.00	0.03	772.87
Worker Commute	0.01	0.26	0.03	0.00	0.01	0.00	36.39	0.00	0.00	36.80
<b>Offsite Total</b>	<b>0.10</b>	<b>0.90</b>	<b>3.71</b>	<b>0.01</b>	<b>0.13</b>	<b>0.07</b>	<b>824.02</b>	<b>0.01</b>	<b>0.03</b>	<b>832.85</b>
<b>Total</b>	<b>0.10</b>	<b>0.90</b>	<b>3.77</b>	<b>0.01</b>	<b>0.13</b>	<b>0.07</b>	<b>834.33</b>	<b>0.01</b>	<b>0.03</b>	<b>843.27</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 9**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Grading**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Water Truck	4	Unpaved	4	120	0.977	0.098	15.64	1.56	0.94	0.09
Survey Truck	1	Unpaved	4	120	0.474	0.047	1.89	0.19	0.11	0.01
Soils Test Crew Truck	1	Unpaved	4	120	0.634	0.063	2.54	0.25	0.15	0.02
<b>Onsite Total</b>							<b>20.07</b>	<b>2.01</b>	<b>1.20</b>	<b>0.12</b>
<b>Offsite</b>										
Water Truck	4	Unpaved	1.5	120	0.977	0.098	5.86	0.59	0.35	0.04
Water Truck	4	Paved	16.5	120	0.003	0.001	0.22	0.05	0.01	0.00
Dump Truck	60	Unpaved	1.5	120	0.977	0.098	87.97	8.80	5.28	0.53
Dump Truck	60	Paved	58.5	120	0.003	0.001	11.69	2.87	0.70	0.17
Worker Commute	15	Paved	58	120	0.003	0.001	2.90	0.71	0.17	0.04
Worker Commute	15	Unpaved	1.5	120	0.474	0.047	10.66	1.07	0.00	0.00
<b>Offsite Total</b>							<b>119.29</b>	<b>14.08</b>	<b>6.52</b>	<b>0.78</b>
<b>Total</b>							<b>139.36</b>	<b>16.09</b>	<b>7.72</b>	<b>0.90</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	25939	3112650	1.00E-03	1.52E-04	26.00	3.94	1.56	0.24
Bulldozing, Scraping and Grading	hr	60	7200	1.735	0.775	104.08	46.52	6.24	2.79
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>130.08</b>	<b>50.45</b>	<b>7.80</b>	<b>3.03</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on handling 3,112,650 CY over 120 days

**Table 10**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Perimeter Wall**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.06	15.81	20.92	0.08	0.72	0.66	7,610.7
Onsite Motor Vehicle Exhaust	0.00	0.08	0.09	0.00	0.00	0.00	27.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	7.14	0.71	
Earthwork Fugitive PM	--	--	--	--	0.03	0.00	
<b>Onsite Total</b>	<b>3.06</b>	<b>15.89</b>	<b>21.01</b>	<b>0.08</b>	<b>7.89</b>	<b>1.38</b>	<b>7638.0</b>
Offsite Motor Vehicle Exhaust	0.23	3.77	5.29	0.02	0.22	0.09	1,482.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	17.34	2.16	
<b>Offsite Total</b>	<b>0.23</b>	<b>3.77</b>	<b>5.29</b>	<b>0.02</b>	<b>17.56</b>	<b>2.25</b>	<b>1482.3</b>
<b>Total</b>	<b>3.29</b>	<b>19.65</b>	<b>26.30</b>	<b>0.09</b>	<b>25.45</b>	<b>3.63</b>	<b>9120.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.47	0.63	0.00	0.02	0.02	228.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.21	0.02	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.09</b>	<b>0.48</b>	<b>0.63</b>	<b>0.00</b>	<b>0.24</b>	<b>0.04</b>	<b>229.1</b>
Offsite Motor Vehicle Exhaust	0.01	0.11	0.16	0.00	0.01	0.00	44.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.31	0.04	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.11</b>	<b>0.16</b>	<b>0.00</b>	<b>0.31</b>	<b>0.05</b>	<b>44.5</b>
<b>Total</b>	<b>0.10</b>	<b>0.59</b>	<b>0.79</b>	<b>0.00</b>	<b>0.55</b>	<b>0.09</b>	<b>273.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	2	60	10
Bobcat	75	1	60	10
14-Ton Crane	250	1	60	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders
14-Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	2.06	11.01	12.49	0.06	0.37	0.34	6220.58	0.19	0.16	6,274.5

**Table 10**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Perimeter Wall**

Bobcat	0.29	2.69	2.41	0.01	0.14	0.13	427.23	0.03	0.01	431.3
14-Ton Crane	0.70	2.11	6.02	0.01	0.21	0.19	896.47	0.06	0.02	905.0
<b>Total</b>	<b>3.06</b>	<b>15.81</b>	<b>20.92</b>	<b>0.08</b>	<b>0.72</b>	<b>0.66</b>	<b>7544.28</b>	<b>0.28</b>	<b>0.20</b>	<b>7610.73</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.06	0.33	0.37	0.00	0.01	0.01	186.62	0.01	0.00	188.2
Bobcat	0.01	0.08	0.07	0.00	0.00	0.00	12.82	0.00	0.00	12.9
14-Ton Crane	0.02	0.06	0.18	0.00	0.01	0.01	26.89	0.00	0.00	27.2
<b>Total</b>	<b>0.09</b>	<b>0.47</b>	<b>0.63</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>226.33</b>	<b>0.01</b>	<b>0.01</b>	<b>228.32</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Concrete Truck	3	60	N/A	1
Flatbed Truck	2	60	N/A	1
Crew Truck	1	60	N/A	4
Foreman Truck	1	60	N/A	4
<b>Offsite</b>				
Concrete Truck	3	60	N/A	60
Flatbed Truck	2	60	N/A	60
Worker Commute	10	60	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flatbed Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Crew Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Foreman Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flatbed Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

**Table 10**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Perimeter Wall**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Concrete Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Flatbed Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Crew Truck	0.00	0.03	0.00	0.00	0.00	0.00	4.62	0.00	0.00	4.68
Foreman Truck	0.00	0.03	0.00	0.00	0.00	0.00	4.62	0.00	0.00	4.68
<b>Onsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>26.94</b>	<b>0.00</b>	<b>0.00</b>	<b>27.26</b>
<b>Offsite</b>										
Concrete Truck	0.08	0.51	2.98	0.01	0.10	0.05	637.25	0.00	0.02	644.05
Flatbed Truck	0.05	0.34	1.99	0.00	0.07	0.04	424.83	0.00	0.01	429.37
Worker Commute	0.10	2.91	0.32	0.00	0.06	0.00	404.29	0.02	0.01	408.91
<b>Offsite Total</b>	<b>0.23</b>	<b>3.77</b>	<b>5.29</b>	<b>0.02</b>	<b>0.22</b>	<b>0.09</b>	<b>1466.37</b>	<b>0.03</b>	<b>0.05</b>	<b>1482.33</b>
<b>Total</b>	<b>0.23</b>	<b>3.84</b>	<b>5.38</b>	<b>0.02</b>	<b>0.23</b>	<b>0.09</b>	<b>1493.31</b>	<b>0.03</b>	<b>0.05</b>	<b>1509.59</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.32
Flatbed Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.81</b>	<b>0.00</b>	<b>0.00</b>	<b>0.82</b>
<b>Offsite</b>										
Concrete Truck	0.00	0.02	0.09	0.00	0.00	0.00	19.12	0.00	0.00	19.32
Flatbed Truck	0.00	0.01	0.06	0.00	0.00	0.00	12.74	0.00	0.00	12.88
Worker Commute	0.00	0.09	0.01	0.00	0.00	0.00	12.13	0.00	0.00	12.27
<b>Offsite Total</b>	<b>0.01</b>	<b>0.11</b>	<b>0.16</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>43.99</b>	<b>0.00</b>	<b>0.00</b>	<b>44.47</b>
<b>Total</b>	<b>0.01</b>	<b>0.12</b>	<b>0.16</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>44.80</b>	<b>0.00</b>	<b>0.00</b>	<b>45.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Concrete Truck	3	Unpaved	1	60	0.977	0.098	2.93	0.29	0.09	0.01
Flatbed Truck	2	Unpaved	1	60	0.977	0.098	1.95	0.20	0.06	0.01
Crew Truck	1	Unpaved	4	60	0.564	0.056	2.25	0.23	0.07	0.01
<b>Onsite Total</b>							<b>7.14</b>	<b>0.71</b>	<b>0.21</b>	<b>0.02</b>

**Table 10**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Perimeter Wall**

<b>Offsite</b>										
Concrete Truck	3	Unpaved	1.5	60	0.977	0.098	4.40	0.44	0.13	0.01
Concrete Truck	3	Paved	58.5	60	0.003	0.001	0.58	0.14	0.02	0.00
Flatbed Truck	2	Unpaved	1.5	60	0.977	0.098	2.93	0.29	0.09	0.01
Flatbed Truck	2	Paved	58.5	60	0.003	0.001	0.39	0.10	0.01	0.00
Worker Commute	10	Paved	58	60	0.003	0.001	1.93	0.47	0.06	0.01
Worker Commute	10	Unpaved	1.5	60	0.474	0.047	7.11	0.71	0.00	0.00
<b>Offsite Total</b>							<b>17.34</b>	<b>2.16</b>	<b>0.31</b>	<b>0.04</b>
<b>Total</b>							<b>24.48</b>	<b>2.87</b>	<b>0.52</b>	<b>0.06</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	28	830	1.00E-03	1.52E-04	0.03	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Based on handling 830 CY over 30 days



**Table 11  
Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM  
Water Well**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.03	5.51	6.25	0.03	0.19	0.17	3,137.2
Onsite Motor Vehicle Exhaust	0.00	0.07	0.03	0.00	0.00	0.00	19.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	9.28	0.93	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.04</b>	<b>5.57</b>	<b>6.28</b>	<b>0.03</b>	<b>9.46</b>	<b>1.10</b>	<b>3156.2</b>
Offsite Motor Vehicle Exhaust	0.09	2.38	0.55	0.00	0.06	0.01	391.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	8.75	1.11	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.38</b>	<b>0.55</b>	<b>0.00</b>	<b>8.81</b>	<b>1.12</b>	<b>391.5</b>
<b>Total</b>	<b>1.12</b>	<b>7.96</b>	<b>6.83</b>	<b>0.04</b>	<b>18.27</b>	<b>2.21</b>	<b>3547.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.11	0.12	0.00	0.00	0.00	62.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.19	0.02	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.11</b>	<b>0.13</b>	<b>0.00</b>	<b>0.19</b>	<b>0.02</b>	<b>63.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	7.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.06	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>7.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.16</b>	<b>0.14</b>	<b>0.00</b>	<b>0.25</b>	<b>0.03</b>	<b>71.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Drill Rig	350	1	40	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Drill Rig	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Drill Rig	1.03	5.51	6.25	0.03	0.19	0.17	3110.29	0.09	0.08	3,137.2
<b>Total</b>	<b>1.03</b>	<b>5.51</b>	<b>6.25</b>	<b>0.03</b>	<b>0.19</b>	<b>0.17</b>	<b>3110.29</b>	<b>0.09</b>	<b>0.08</b>	<b>3137.23</b>

**Table 11  
Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM  
Water Well**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
Drill Rig	0.02	0.11	0.12	0.00	0.00	0.00	62.21	0.00	0.00	62.7
<b>Total</b>	<b>0.02</b>	<b>0.11</b>	<b>0.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>62.21</b>	<b>0.00</b>	<b>0.00</b>	<b>62.74</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Water Truck	1	40	N/A	1
Tool Truck	2	40	N/A	4
Crew Truck	2	40	N/A	4
<b>Offsite</b>				
Water Truck	1	40	N/A	18
Worker Commute	8	40	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO <sub>2</sub> (lb/mi) <sup>a</sup>	CH <sub>4</sub> (lb/mi) <sup>a</sup>	N <sub>2</sub> O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO <sub>2</sub> (lb/day) <sup>a</sup>	CH <sub>4</sub> (lb/day) <sup>a</sup>	N <sub>2</sub> O (lb/day) <sup>a</sup>	CO <sub>2</sub> e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Tool Truck	0.00	0.00	0.01	0.00	0.00	0.00	5.99	0.00	0.00	6.06
Crew Truck	0.00	0.06	0.01	0.00	0.00	0.00	9.24	0.00	0.00	9.37

**Table 11  
Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM  
Water Well**

<b>Onsite Total</b>	<b>0.00</b>	<b>0.07</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>18.77</b>	<b>0.00</b>	<b>0.00</b>	<b>19.01</b>
<b>Offsite</b>										
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.09</b>	<b>2.38</b>	<b>0.55</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>387.16</b>	<b>0.02</b>	<b>0.01</b>	<b>391.53</b>
<b>Total</b>	<b>0.09</b>	<b>2.45</b>	<b>0.59</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>405.93</b>	<b>0.02</b>	<b>0.01</b>	<b>410.54</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.12
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.19
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.38</b>	<b>0.00</b>	<b>0.00</b>	<b>0.38</b>
<b>Offsite</b>										
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.27	0.00	0.00	1.29
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.47	0.00	0.00	6.54
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.74</b>	<b>0.00</b>	<b>0.00</b>	<b>7.83</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.12</b>	<b>0.00</b>	<b>0.00</b>	<b>8.21</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Water Truck	1	Unpaved	1	40	0.977	0.098	0.98	0.10	0.02	0.00
Tool Truck	2	Unpaved	4	40	0.474	0.047	3.79	0.38	0.08	0.01
Crew Truck	2	Unpaved	4	40	0.564	0.056	4.51	0.45	0.09	0.01
<b>Onsite Total</b>							<b>9.28</b>	<b>0.93</b>	<b>0.19</b>	<b>0.02</b>
<b>Offsite</b>										
Water Truck	1	Unpaved	1.5	40	0.977	0.098	1.47	0.15	0.03	0.00
Water Truck	1	Paved	16.5	40	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	8	Paved	58	40	0.003	0.001	1.54	0.38	0.03	0.01
Worker Commute	8	Unpaved	1.5	40	0.474	0.047	5.68	0.57	0.00	0.00
<b>Offsite Total</b>							<b>8.75</b>	<b>1.11</b>	<b>0.06</b>	<b>0.01</b>
<b>Total</b>							<b>18.03</b>	<b>2.04</b>	<b>0.25</b>	<b>0.03</b>

**Table 11**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Water Well**

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 12**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Civil**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.14	10.95	14.29	0.03	0.79	0.72	3,249.2
Onsite Motor Vehicle Exhaust	0.06	0.42	2.37	0.01	0.08	0.04	514.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	140.72	14.07	
Earthwork Fugitive PM	--	--	--	--	0.08	0.01	
<b>Onsite Total</b>	<b>2.20</b>	<b>11.37</b>	<b>16.66</b>	<b>0.04</b>	<b>141.66</b>	<b>14.85</b>	<b>3763.2</b>
Offsite Motor Vehicle Exhaust	3.64	26.30	139.68	0.30	4.62	2.54	30,447.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	241.28	28.33	
<b>Offsite Total</b>	<b>3.64</b>	<b>26.30</b>	<b>139.68</b>	<b>0.30</b>	<b>245.90</b>	<b>30.87</b>	<b>30447.4</b>
<b>Total</b>	<b>5.84</b>	<b>37.68</b>	<b>156.33</b>	<b>0.34</b>	<b>387.55</b>	<b>45.71</b>	<b>34210.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.06	0.33	0.43	0.00	0.02	0.02	97.5
Onsite Motor Vehicle Exhaust	0.00	0.01	0.07	0.00	0.00	0.00	15.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	4.21	0.42	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.07</b>	<b>0.34</b>	<b>0.50</b>	<b>0.00</b>	<b>4.24</b>	<b>0.44</b>	<b>112.9</b>
Offsite Motor Vehicle Exhaust	0.11	0.79	4.19	0.01	0.14	0.08	913.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.07	0.83	
<b>Offsite Total</b>	<b>0.11</b>	<b>0.79</b>	<b>4.19</b>	<b>0.01</b>	<b>7.21</b>	<b>0.91</b>	<b>913.4</b>
<b>Total</b>	<b>0.18</b>	<b>1.13</b>	<b>4.69</b>	<b>0.01</b>	<b>11.45</b>	<b>1.35</b>	<b>1026.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	1	60	5
Excavator	85	2	60	3
Skip Loader	350	1	60	3
Forklift	100	1	60	4
Trencher	75	1	60	4
Bobcat	75	1	60	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Excavator	85	0.083	0.507	0.529	0.001	0.039	0.036	73.557	0.008	0.002	Excavators
Skip Loader	350	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
Trencher	75	0.108	0.456	0.665	0.001	0.055	0.051	64.837	0.010	0.002	Trenchers
Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders

**Table 12**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Civil**

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	0.52	2.75	3.12	0.02	0.09	0.09	1555.15	0.05	0.04	1,568.6
Excavator	0.50	3.04	3.17	0.01	0.24	0.22	441.34	0.05	0.01	445.9
Skip Loader	0.48	1.68	3.77	0.01	0.13	0.12	710.39	0.04	0.02	717.0
Forklift	0.12	0.85	0.84	0.00	0.06	0.05	124.79	0.01	0.00	126.0
Trencher	0.43	1.82	2.66	0.00	0.22	0.20	259.35	0.04	0.01	262.3
Bobcat	0.09	0.81	0.72	0.00	0.04	0.04	128.17	0.01	0.00	129.4
<b>Total</b>	<b>2.14</b>	<b>10.95</b>	<b>14.29</b>	<b>0.03</b>	<b>0.79</b>	<b>0.72</b>	<b>3219.18</b>	<b>0.19</b>	<b>0.08</b>	<b>3249.19</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.02	0.08	0.09	0.00	0.00	0.00	46.65	0.00	0.00	47.1
Excavator	0.01	0.09	0.10	0.00	0.01	0.01	13.24	0.00	0.00	13.4
Skip Loader	0.01	0.05	0.11	0.00	0.00	0.00	21.31	0.00	0.00	21.5
Forklift	0.00	0.03	0.03	0.00	0.00	0.00	3.74	0.00	0.00	3.8
Trencher	0.01	0.05	0.08	0.00	0.01	0.01	7.78	0.00	0.00	7.9
Bobcat	0.00	0.02	0.02	0.00	0.00	0.00	3.85	0.00	0.00	3.9
<b>Total</b>	<b>0.06</b>	<b>0.33</b>	<b>0.43</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>96.58</b>	<b>0.01</b>	<b>0.00</b>	<b>97.48</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Dump Truck	1	60	N/A	1
Concrete Truck	42	60	N/A	1
Water Truck	2	60	N/A	1
Tool Truck	1	60	N/A	1
Gravel Delivery Truck	98	60	N/A	1
Inspection Services	1	20	N/A	1
<b>Offsite</b>				
Water Truck	1	60	N/A	18
Gravel Delivery Truck	98	60	N/A	60
Concrete Truck	42	60	N/A	60
Worker Commute	8	60	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

**Table 12**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Civil**

Gravel delivery truck based on 42,550 CY over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Gravel Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Gravel Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Concrete Truck	0.02	0.12	0.70	0.00	0.02	0.01	148.69	0.00	0.01	150.28
Water Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Tool Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Gravel Delivery Truck	0.04	0.28	1.62	0.00	0.05	0.03	346.94	0.00	0.01	350.65
Inspection Services	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.06</b>	<b>0.42</b>	<b>2.37</b>	<b>0.01</b>	<b>0.08</b>	<b>0.04</b>	<b>508.57</b>	<b>0.00</b>	<b>0.02</b>	<b>514.01</b>
<b>Offsite</b>										
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Gravel Delivery Truck	2.49	16.74	97.39	0.21	3.19	1.77	20816.69	0.12	0.71	21039.11
Concrete Truck	1.07	7.18	41.74	0.09	1.37	0.76	8921.44	0.05	0.30	9016.76
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>3.64</b>	<b>26.30</b>	<b>139.68</b>	<b>0.30</b>	<b>4.62</b>	<b>2.54</b>	<b>30125.29</b>	<b>0.19</b>	<b>1.03</b>	<b>30447.40</b>
<b>Total</b>	<b>3.70</b>	<b>26.72</b>	<b>142.05</b>	<b>0.30</b>	<b>4.70</b>	<b>2.58</b>	<b>30633.85</b>	<b>0.19</b>	<b>1.04</b>	<b>30961.41</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11

**Table 12  
Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM  
Civil**

Concrete Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.46	0.00	0.00	4.51
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.04
Gravel Delivery Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.41	0.00	0.00	10.52
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>15.23</b>	<b>0.00</b>	<b>0.00</b>	<b>15.40</b>
<b>Offsite</b>										
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.91	0.00	0.00	1.93
Gravel Delivery Truck	0.07	0.50	2.92	0.01	0.10	0.05	624.50	0.00	0.02	631.17
Concrete Truck	0.03	0.22	1.25	0.00	0.04	0.02	267.64	0.00	0.01	270.50
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.70	0.00	0.00	9.81
<b>Offsite Total</b>	<b>0.11</b>	<b>0.79</b>	<b>4.19</b>	<b>0.01</b>	<b>0.14</b>	<b>0.08</b>	<b>903.76</b>	<b>0.01</b>	<b>0.03</b>	<b>913.42</b>
<b>Total</b>	<b>0.11</b>	<b>0.80</b>	<b>4.26</b>	<b>0.01</b>	<b>0.14</b>	<b>0.08</b>	<b>918.99</b>	<b>0.01</b>	<b>0.03</b>	<b>928.82</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Dump Truck	1	Unpaved	1	60	0.977	0.098	0.98	0.10	0.03	0.00
Concrete Truck	42	Unpaved	1	60	0.977	0.098	41.05	4.11	1.23	0.12
Water Truck	2	Unpaved	1	60	0.977	0.098	1.95	0.20	0.06	0.01
Tool Truck	1	Unpaved	1	60	0.474	0.047	0.47	0.05	0.01	0.00
Gravel Delivery Truck	98	Unpaved	1	60	0.977	0.098	95.79	9.58	2.87	0.29
Inspection Services	1	Unpaved	1	20	0.474	0.047	0.47	0.05	0.00	0.00
<b>Onsite Total</b>							<b>140.72</b>	<b>14.07</b>	<b>4.21</b>	<b>0.42</b>
<b>Offsite</b>										
Water Truck	1	Unpaved	1.5	60	0.977	0.098	1.47	0.15	0.04	0.00
Water Truck	1	Paved	16.5	60	0.003	0.001	0.05	0.01	0.00	0.00
Gravel Delivery Truck	98	Unpaved	1.5	60	0.977	0.098	143.68	14.37	4.31	0.43
Gravel Delivery Truck	98	Paved	58.5	60	0.003	0.001	19.09	4.69	0.57	0.14
Concrete Truck	42	Unpaved	1.5	60	0.977	0.098	61.58	6.16	1.85	0.18
Concrete Truck	42	Paved	58.5	60	0.003	0.001	8.18	2.01	0.25	0.06
Worker Commute	8	Paved	58	60	0.003	0.001	1.54	0.38	0.05	0.01
Worker Commute	8	Unpaved	1.5	60	0.474	0.047	5.68	0.57	0.00	0.00
<b>Offsite Total</b>							<b>241.28</b>	<b>28.33</b>	<b>7.07</b>	<b>0.83</b>
<b>Total</b>							<b>381.99</b>	<b>42.40</b>	<b>11.28</b>	<b>1.25</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**



**Table 12**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Civil**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	77	4600	1.00E-03	1.52E-04	0.08	0.01	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.08</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on handling 4,600 CY over 60 days

**Table 13**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Electrical**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.65	6.81	13.06	0.02	0.62	0.57	1,960.9
Onsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	4.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	3.14	0.31	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.65</b>	<b>6.82</b>	<b>13.07</b>	<b>0.02</b>	<b>3.76</b>	<b>0.88</b>	<b>1965.1</b>
Offsite Motor Vehicle Exhaust	0.10	2.91	0.32	0.00	0.06	0.00	408.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	9.04	1.18	
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>9.10</b>	<b>1.19</b>	<b>408.9</b>
<b>Total</b>	<b>1.75</b>	<b>9.74</b>	<b>13.39</b>	<b>0.03</b>	<b>12.86</b>	<b>2.07</b>	<b>2374.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.04	0.19	0.33	0.00	0.02	0.02	46.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.04</b>	<b>0.19</b>	<b>0.33</b>	<b>0.00</b>	<b>0.12</b>	<b>0.03</b>	<b>47.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.10	0.01	0.00	0.00	0.00	14.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>14.3</b>
<b>Total</b>	<b>0.05</b>	<b>0.29</b>	<b>0.34</b>	<b>0.00</b>	<b>0.18</b>	<b>0.04</b>	<b>61.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Reach Manlift	75	1	70	4
Manlift	75	2	70	4
14 Ton Crane	250	1	70	3
150 Ton Crane	300	1	10	4
5 Ton Crane	250	1	70	3
Forklift	100	1	70	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Reach Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
14 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
150 Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
5 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts

**Table 13**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Electrical**

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Reach Manlift	0.17	0.94	1.21	0.00	0.09	0.08	152.15	0.01	0.00	153.7
Manlift	0.33	1.88	2.42	0.00	0.18	0.16	304.30	0.03	0.01	307.4
14 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
150 Ton Crane	0.53	1.77	4.28	0.01	0.15	0.14	719.76	0.05	0.02	726.6
5 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
Forklift	0.09	0.64	0.63	0.00	0.04	0.04	93.59	0.01	0.00	94.5
<b>Total</b>	<b>1.65</b>	<b>6.81</b>	<b>13.06</b>	<b>0.02</b>	<b>0.62</b>	<b>0.57</b>	<b>1942.15</b>	<b>0.15</b>	<b>0.05</b>	<b>1960.95</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Reach Manlift	0.01	0.03	0.04	0.00	0.00	0.00	5.33	0.00	0.00	5.4
Manlift	0.01	0.07	0.08	0.00	0.01	0.01	10.65	0.00	0.00	10.8
14 Ton Crane	0.01	0.03	0.08	0.00	0.00	0.00	11.77	0.00	0.00	11.9
150 Ton Crane	0.00	0.01	0.02	0.00	0.00	0.00	3.60	0.00	0.00	3.6
5 Ton Crane	0.01	0.03	0.08	0.00	0.00	0.00	11.77	0.00	0.00	11.9
Forklift	0.00	0.02	0.02	0.00	0.00	0.00	3.28	0.00	0.00	3.3
<b>Total</b>	<b>0.04</b>	<b>0.19</b>	<b>0.33</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>46.38</b>	<b>0.00</b>	<b>0.00</b>	<b>46.84</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Pick-up Truck	2	70	N/A	1
Crew Truck	2	70	N/A	1
Inspection Services	1	20	N/A	1
<b>Offsite</b>				
Worker Commute	10	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Pick-up Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

**Table 13**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Electrical**

Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
Inspection Services	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.15</b>	<b>0.00</b>	<b>0.00</b>	<b>4.20</b>
<b>Offsite</b>										
Worker Commute	0.10	2.91	0.32	0.00	0.06	0.00	404.29	0.02	0.01	408.91
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>404.29</b>	<b>0.02</b>	<b>0.01</b>	<b>408.91</b>
<b>Total</b>	<b>0.10</b>	<b>2.92</b>	<b>0.32</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>408.44</b>	<b>0.02</b>	<b>0.01</b>	<b>413.11</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.12</b>
<b>Offsite</b>										
Worker Commute	0.00	0.10	0.01	0.00	0.00	0.00	14.15	0.00	0.00	14.31
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.15</b>	<b>0.00</b>	<b>0.00</b>	<b>14.31</b>
<b>Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.27</b>	<b>0.00</b>	<b>0.00</b>	<b>14.43</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Pick-up Truck	2	Unpaved	1	70	0.770	0.077	1.54	0.15	0.05	0.01
Crew Truck	2	Unpaved	1	70	0.564	0.056	1.13	0.11	0.04	0.00
Inspection Services	1	Unpaved	1	20	0.474	0.047	0.47	0.05	0.00	0.00
<b>Onsite Total</b>							<b>3.14</b>	<b>0.31</b>	<b>0.10</b>	<b>0.01</b>

**Table 13**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Electrical**

<b>Offsite</b>										
Worker Commute	10	Paved	58	70	0.003	0.001	1.93	0.47	0.07	0.02
Worker Commute	10	Unpaved	1.5	70	0.474	0.047	7.11	0.71	0.00	0.00
<b>Offsite Total</b>							<b>9.04</b>	<b>1.18</b>	<b>0.07</b>	<b>0.02</b>
<b>Total</b>							<b>12.18</b>	<b>1.50</b>	<b>0.17</b>	<b>0.03</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 14**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Wiring**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	2.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	1.75	0.17	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>1.75</b>	<b>0.17</b>	<b>2.3</b>
Offsite Motor Vehicle Exhaust	0.06	1.75	0.19	0.00	0.04	0.00	245.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	5.42	0.71	
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>5.46</b>	<b>0.71</b>	<b>245.3</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>7.21</b>	<b>0.89</b>	<b>247.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	7.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>7.4</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>7.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 14**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Wiring**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Wiring Truck	1	60	N/A	1
Pick-up Truck	1	60	N/A	1
<b>Offsite</b>				
Worker Commute	6	60	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Wiring Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Pick-up Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Pick-up Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.31</b>	<b>0.00</b>	<b>0.00</b>	<b>2.34</b>
<b>Offsite</b>										
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>242.58</b>	<b>0.01</b>	<b>0.01</b>	<b>245.34</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>244.88</b>	<b>0.01</b>	<b>0.01</b>	<b>247.69</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 14**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Wiring**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.04
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.04
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>
<b>Offsite</b>										
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	7.28	0.00	0.00	7.36
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.28</b>	<b>0.00</b>	<b>0.00</b>	<b>7.36</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.35</b>	<b>0.00</b>	<b>0.00</b>	<b>7.43</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Wiring Truck	1	Unpaved	1	60	0.977	0.098	0.98	0.10	0.03	0.00
Pick-up Truck	1	Unpaved	1	60	0.770	0.077	0.77	0.08	0.02	0.00
<b>Onsite Total</b>							<b>1.75</b>	<b>0.17</b>	<b>0.05</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	6	Paved	58	60	0.003	0.001	1.16	0.28	0.03	0.01
Worker Commute	6	Unpaved	1.5	60	0.474	0.047	4.26	0.43	0.00	0.00
<b>Offsite Total</b>							<b>5.42</b>	<b>0.71</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>7.17</b>	<b>0.89</b>	<b>0.09</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 15**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**MEER**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.79	2.66	6.43	0.01	0.23	0.21	1,089.8
Onsite Motor Vehicle Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	5.5
Onsite Motor Vehicle Fugitive PM	--	--	--	--	2.93	0.29	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.79</b>	<b>2.67</b>	<b>6.45</b>	<b>0.01</b>	<b>3.17</b>	<b>0.51</b>	<b>1095.3</b>
Offsite Motor Vehicle Exhaust	0.08	2.33	0.25	0.00	0.05	0.00	327.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.23	0.95	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>7.28</b>	<b>0.95</b>	<b>327.1</b>
<b>Total</b>	<b>0.88</b>	<b>5.00</b>	<b>6.70</b>	<b>0.01</b>	<b>10.44</b>	<b>1.46</b>	<b>1422.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	5.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.12	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>5.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.09	0.01	0.00	0.00	0.00	13.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.06	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.06</b>	<b>0.02</b>	<b>13.1</b>
<b>Total</b>	<b>0.01</b>	<b>0.11</b>	<b>0.04</b>	<b>0.00</b>	<b>0.18</b>	<b>0.03</b>	<b>18.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30 Ton Crane	350	1	10	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30 Ton Crane	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30 Ton Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
<b>Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.43</b>	<b>0.01</b>	<b>0.23</b>	<b>0.21</b>	<b>1079.64</b>	<b>0.07</b>	<b>0.03</b>	<b>1089.84</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 15**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**MEER**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30 Ton Crane	0.00	0.01	0.03	0.00	0.00	0.00	5.40	0.00	0.00	5.4
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.40</b>	<b>0.00</b>	<b>0.00</b>	<b>5.45</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	80	N/A	1
Stake Truck	1	80	N/A	1
Wiring Truck	1	80	N/A	1
<b>Offsite</b>				
Worker Commute	8	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Wiring Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Stake Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.44</b>	<b>0.00</b>	<b>0.00</b>	<b>5.51</b>
<b>Offsite</b>										
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>323.43</b>	<b>0.02</b>	<b>0.01</b>	<b>327.13</b>
<b>Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.27</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>328.88</b>	<b>0.02</b>	<b>0.01</b>	<b>332.63</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 15**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**MEER**

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>
<b>Offsite</b>										
Worker Commute	0.00	0.09	0.01	0.00	0.00	0.00	12.94	0.00	0.00	13.09
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.94</b>	<b>0.00</b>	<b>0.00</b>	<b>13.09</b>
<b>Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>13.16</b>	<b>0.00</b>	<b>0.00</b>	<b>13.31</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Unpaved	1	80	0.977	0.098	0.98	0.10	0.04	0.00
Stake Truck	1	Unpaved	1	80	0.977	0.098	0.98	0.10	0.04	0.00
Wiring Truck	1	Unpaved	1	80	0.977	0.098	0.98	0.10	0.04	0.00
<b>Onsite Total</b>							<b>2.93</b>	<b>0.29</b>	<b>0.12</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	8	Paved	58	80	0.003	0.001	1.54	0.38	0.06	0.02
Worker Commute	8	Unpaved	1.5	80	0.474	0.047	5.68	0.57	0.00	0.00
<b>Offsite Total</b>							<b>7.23</b>	<b>0.95</b>	<b>0.06</b>	<b>0.02</b>
<b>Total</b>							<b>10.16</b>	<b>1.24</b>	<b>0.18</b>	<b>0.03</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

**Table 15**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**MEER**

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 16**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Maintenance**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	2.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	1.69	0.17	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.69</b>	<b>0.17</b>	<b>2.3</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.61	0.47	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>3.64</b>	<b>0.47</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>5.33</b>	<b>0.64</b>	<b>165.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>3.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 16**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Maintenance**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Foreman Truck	1	40	N/A	1
Crew Truck	2	40	N/A	1
<b>Offsite</b>				
Worker Commute	4	40	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Foreman Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.25</b>	<b>0.00</b>	<b>0.00</b>	<b>2.27</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 16**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Maintenance**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>
<b>Offsite</b>										
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>	<b>0.00</b>	<b>0.00</b>	<b>3.27</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.28</b>	<b>0.00</b>	<b>0.00</b>	<b>3.32</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Foreman Truck	1	Unpaved	1	40	0.564	0.056	0.56	0.06	0.01	0.00
Crew Truck	2	Unpaved	1	40	0.564	0.056	1.13	0.11	0.02	0.00
<b>Onsite Total</b>							<b>1.69</b>	<b>0.17</b>	<b>0.03</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	40	0.003	0.001	0.77	0.19	0.02	0.00
Worker Commute	4	Unpaved	1.5	40	0.474	0.047	2.84	0.28	0.00	0.00
<b>Offsite Total</b>							<b>3.61</b>	<b>0.47</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>5.31</b>	<b>0.64</b>	<b>0.05</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 17**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Testing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.56	0.06	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.56</b>	<b>0.06</b>	<b>0.8</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.61	0.47	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>3.64</b>	<b>0.47</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>4.20</b>	<b>0.53</b>	<b>164.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.04	0.00	0.00	0.00	0.00	5.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>5.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions



**Table 17**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Testing**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Crew Truck	1	70	N/A	1
<b>Offsite</b>				
Worker Commute	4	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.75</b>	<b>0.00</b>	<b>0.00</b>	<b>0.76</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.47</b>	<b>0.01</b>	<b>0.01</b>	<b>164.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03

**Table 17**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Testing**

<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>
<b>Offsite</b>										
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.66</b>	<b>0.00</b>	<b>0.00</b>	<b>5.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.69</b>	<b>0.00</b>	<b>0.00</b>	<b>5.75</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Crew Truck	1	Unpaved	1	70	0.564	0.056	0.56	0.06	0.02	0.00
<b>Onsite Total</b>							<b>0.56</b>	<b>0.06</b>	<b>0.02</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	70	0.003	0.001	0.77	0.19	0.03	0.01
Worker Commute	4	Unpaved	1.5	70	0.474	0.047	2.84	0.28	0.00	0.00
<b>Offsite Total</b>							<b>3.61</b>	<b>0.47</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>4.18</b>	<b>0.53</b>	<b>0.05</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 18**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Asphalting**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	5.70	21.43	50.61	0.08	1.90	1.75	7,304.9
Onsite Motor Vehicle Exhaust	0.03	0.18	1.01	0.00	0.03	0.02	219.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	59.77	5.98	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
Asphaltic Paving VOC	0.7	--	--	--	--	--	--
<b>Onsite Total</b>	<b>6.47</b>	<b>21.61</b>	<b>51.63</b>	<b>0.08</b>	<b>61.71</b>	<b>7.75</b>	<b>7524.38</b>
Offsite Motor Vehicle Exhaust	2.04	15.07	77.70	0.17	2.58	1.41	16,990.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	134.97	15.88	
<b>Offsite Total</b>	<b>2.04</b>	<b>15.07</b>	<b>77.70</b>	<b>0.17</b>	<b>137.55</b>	<b>17.29</b>	<b>16990.8</b>
<b>Total</b>	<b>8.52</b>	<b>36.69</b>	<b>129.33</b>	<b>0.25</b>	<b>199.26</b>	<b>25.03</b>	<b>24515.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.32	0.76	0.00	0.03	0.03	109.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.01	0.00	0.00	0.00	2.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.90	0.09	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
Asphaltic Paving VOC	0.01	--	--	--	--	--	--
<b>Onsite Total</b>	<b>0.10</b>	<b>0.32</b>	<b>0.77</b>	<b>0.00</b>	<b>0.93</b>	<b>0.12</b>	<b>111.7</b>
Offsite Motor Vehicle Exhaust	0.03	0.23	1.17	0.00	0.04	0.02	254.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.96	0.23	
<b>Offsite Total</b>	<b>0.03</b>	<b>0.23</b>	<b>1.17</b>	<b>0.00</b>	<b>2.00</b>	<b>0.25</b>	<b>254.9</b>
<b>Total</b>	<b>0.13</b>	<b>0.55</b>	<b>1.93</b>	<b>0.00</b>	<b>2.92</b>	<b>0.37</b>	<b>366.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Paving Roller	200	2	30	10
Asphalt Paver	250	1	30	10
Tractor	150	1	30	10
Asphalt Curb Machine	250	1	30	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Paving Roller	200	0.104	0.346	0.995	0.002	0.033	0.031	152.952	0.009	0.004	Rollers
Asphalt Paver	250	0.176	0.537	1.546	0.002	0.059	0.054	194.197	0.016	0.005	Pavers
Tractor	150	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Asphalt Curb Machine	250	0.108	0.330	0.969	0.001	0.036	0.033	122.182	0.010	0.003	Paving Equipment

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 18**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Asphalting**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Paving Roller	2.08	6.92	19.89	0.03	0.67	0.61	3059.05	0.19	0.08	3,087.6
Asphalt Paver	1.76	5.37	15.46	0.02	0.59	0.54	1941.97	0.16	0.05	1,961.0
Tractor	0.79	5.84	5.57	0.01	0.29	0.27	1012.96	0.07	0.03	1,022.7
Asphalt Curb Machine	1.08	3.30	9.69	0.01	0.36	0.33	1221.82	0.10	0.03	1,233.7
<b>Total</b>	<b>5.70</b>	<b>21.43</b>	<b>50.61</b>	<b>0.08</b>	<b>1.90</b>	<b>1.75</b>	<b>7235.80</b>	<b>0.51</b>	<b>0.19</b>	<b>7304.95</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Paving Roller	0.03	0.10	0.30	0.00	0.01	0.01	45.89	0.00	0.00	46.3
Asphalt Paver	0.03	0.08	0.23	0.00	0.01	0.01	29.13	0.00	0.00	29.4
Tractor	0.01	0.09	0.08	0.00	0.00	0.00	15.19	0.00	0.00	15.3
Asphalt Curb Machine	0.02	0.05	0.15	0.00	0.01	0.00	18.33	0.00	0.00	18.5
<b>Total</b>	<b>0.09</b>	<b>0.32</b>	<b>0.76</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>108.54</b>	<b>0.01</b>	<b>0.00</b>	<b>109.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Stake Truck	1	30	N/A	1
Dump Truck	1	30	N/A	1
Crew Truck	2	30	N/A	1
Asphalt Delivery Truck	22	30	N/A	1
Aggregate Base Delivery Truck	36	30	N/A	1
<b>Offsite</b>				
Asphalt Delivery Truck	22	30	N/A	60
Aggregate Base Delivery Truck	56	30	N/A	60
Worker Commute	6	30	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Crew Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Asphalt Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 18**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Asphalting**

Aggregate Base Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
<b>Offsite</b>										
Asphalt Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Aggregate Base Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Stake Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Crew Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Asphalt Delivery Truck	0.01	0.06	0.36	0.00	0.01	0.01	77.89	0.00	0.00	78.72
Aggregate Base Delivery Truck	0.02	0.10	0.60	0.00	0.02	0.01	127.45	0.00	0.00	128.81
<b>Onsite Total</b>	<b>0.03</b>	<b>0.18</b>	<b>1.01</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>217.11</b>	<b>0.00</b>	<b>0.01</b>	<b>219.43</b>
<b>Offsite</b>										
Asphalt Delivery Truck	0.56	3.76	21.86	0.05	0.72	0.40	4673.13	0.03	0.16	4723.07
Aggregate Base Delivery Truck	1.42	9.57	55.65	0.12	1.82	1.01	11895.25	0.07	0.41	12022.35
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>2.04</b>	<b>15.07</b>	<b>77.70</b>	<b>0.17</b>	<b>2.58</b>	<b>1.41</b>	<b>16810.96</b>	<b>0.11</b>	<b>0.57</b>	<b>16990.76</b>
<b>Total</b>	<b>2.07</b>	<b>15.26</b>	<b>78.71</b>	<b>0.17</b>	<b>2.61</b>	<b>1.43</b>	<b>17028.07</b>	<b>0.11</b>	<b>0.58</b>	<b>17210.19</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Aggregate Base Delivery Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.91	0.00	0.00	1.93
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.09</b>	<b>0.00</b>	<b>0.00</b>	<b>2.11</b>
<b>Offsite</b>										
Asphalt Delivery Truck	0.01	0.06	0.33	0.00	0.01	0.01	70.10	0.00	0.00	70.85
Aggregate Base Delivery Truck	0.02	0.14	0.83	0.00	0.03	0.02	178.43	0.00	0.01	180.34
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	3.64	0.00	0.00	3.68
<b>Offsite Total</b>	<b>0.03</b>	<b>0.23</b>	<b>1.17</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>252.16</b>	<b>0.00</b>	<b>0.01</b>	<b>254.86</b>
<b>Total</b>	<b>0.03</b>	<b>0.23</b>	<b>1.18</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>254.25</b>	<b>0.00</b>	<b>0.01</b>	<b>256.97</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 18**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Asphalting**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Stake Truck	1	Unpaved	1	30	0.977	0.098	0.98	0.10	0.01	0.00
Dump Truck	1	Unpaved	1	30	0.977	0.098	0.98	0.10	0.01	0.00
Crew Truck	2	Unpaved	1	30	0.564	0.056	1.13	0.11	0.02	0.00
Asphalt Delivery Truck	22	Unpaved	1	30	0.977	0.098	21.50	2.15	0.32	0.03
Aggregate Base Delivery Truck	36	Unpaved	1	30	0.977	0.098	35.19	3.52	0.53	0.05
<b>Onsite Total</b>							<b>59.77</b>	<b>5.98</b>	<b>0.90</b>	<b>0.09</b>
<b>Offsite</b>										
Asphalt Delivery Truck	22	Unpaved	1.5	30	0.977	0.098	32.25	3.23	0.48	0.05
Asphalt Delivery Truck	22	Paved	58.5	30	0.003	0.001	4.29	1.05	0.06	0.02
Aggregate Base Delivery Truck	56	Unpaved	1.5	30	0.977	0.098	82.10	8.21	1.23	0.12
Aggregate Base Delivery Truck	56	Paved	58.5	30	0.003	0.001	10.91	2.68	0.16	0.04
Worker Commute	6	Paved	58	30	0.003	0.001	1.16	0.28	0.02	0.00
Worker Commute	6	Unpaved	1.5	30	0.474	0.047	4.26	0.43	0.00	0.00
<b>Offsite Total</b>							<b>134.97</b>	<b>15.88</b>	<b>1.96</b>	<b>0.23</b>
<b>Total</b>							<b>194.74</b>	<b>21.85</b>	<b>2.86</b>	<b>0.32</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Asphaltic Paving VOC Emissions**

Area Paved (acre/day) <sup>a</sup>	Emission Factor (lb/acre) <sup>b</sup>	VOC (lb/day) <sup>c</sup>
0.29	2.62	0.7

a Based on 372,400 sq. ft. of area paved in 30 days

b From CalEEMod User's Guide

c Emissions [lb/day] = Emission factor [lb/acre] x Area paved [acre/day]

**Table 19**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.06	0.01	0.00	0.00	0.00	9.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	3.79	0.38	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>3.79</b>	<b>0.38</b>	<b>9.4</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.81	0.24	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>1.82</b>	<b>0.24</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.65</b>	<b>0.07</b>	<b>0.00</b>	<b>5.61</b>	<b>0.62</b>	<b>91.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table 19**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Survey**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Survey Truck	2	15	N/A	4
<b>Offsite</b>				
Worker Commute	2	15	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Survey Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.06	0.01	0.00	0.00	0.00	9.24	0.00	0.00	9.37
<b>Onsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.24</b>	<b>0.00</b>	<b>0.00</b>	<b>9.37</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>



**Table 19**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Survey**

<b>Total</b>	<b>0.02</b>	<b>0.65</b>	<b>0.07</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>90.09</b>	<b>0.01</b>	<b>0.00</b>	<b>91.15</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	--------------	-------------	-------------	--------------

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>
<b>Offsite</b>										
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.68</b>	<b>0.00</b>	<b>0.00</b>	<b>0.68</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Survey Truck	2	Unpaved	4	15	0.474	0.047	3.79	0.38	0.03	0.00
<b>Onsite Total</b>							<b>3.79</b>	<b>0.38</b>	<b>0.03</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	15	0.003	0.001	0.39	0.09	0.00	0.00
Worker Commute	2	Unpaved	1.5	15	0.474	0.047	1.42	0.14	0.00	0.00
<b>Offsite Total</b>							<b>1.81</b>	<b>0.24</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>							<b>5.60</b>	<b>0.62</b>	<b>0.03</b>	<b>0.00</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00

**Table 19**  
**Substation Construction Emissions - Initial Build Out - Controlled Fugitive PM**  
**Survey**

Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 20**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Civil**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	7.66	39.98	50.00	0.16	2.20	2.03	16,475.6
Onsite Motor Vehicle Exhaust	0.01	0.08	0.27	0.00	0.01	0.00	61.9
Onsite Motor Vehicle Fugitive PM	--	--	--	--	17.53	1.75	
Earthwork Fugitive PM	--	--	--	--	0.15	0.02	
<b>Onsite Total</b>	<b>7.67</b>	<b>40.06</b>	<b>50.27</b>	<b>0.16</b>	<b>19.89</b>	<b>3.81</b>	<b>16537.6</b>
Offsite Motor Vehicle Exhaust	0.42	6.18	11.01	0.03	0.43	0.20	2,889.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	33.21	4.04	
<b>Offsite Total</b>	<b>0.42</b>	<b>6.18</b>	<b>11.01</b>	<b>0.03</b>	<b>33.64</b>	<b>4.24</b>	<b>2889.0</b>
<b>Total</b>	<b>8.09</b>	<b>46.24</b>	<b>61.28</b>	<b>0.19</b>	<b>53.53</b>	<b>8.04</b>	<b>19426.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.77	4.00	5.00	0.02	0.22	0.20	1,647.6
Onsite Motor Vehicle Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	6.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	1.68	0.17	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.77</b>	<b>4.00</b>	<b>5.03</b>	<b>0.02</b>	<b>1.92</b>	<b>0.37</b>	<b>1653.6</b>
Offsite Motor Vehicle Exhaust	0.04	0.62	1.10	0.00	0.04	0.02	288.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2.25	0.30	
<b>Offsite Total</b>	<b>0.04</b>	<b>0.62</b>	<b>1.10</b>	<b>0.00</b>	<b>2.30</b>	<b>0.32</b>	<b>288.9</b>
<b>Total</b>	<b>0.81</b>	<b>4.62</b>	<b>6.13</b>	<b>0.02</b>	<b>4.21</b>	<b>0.69</b>	<b>1942.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	4	200	10
Excavator	85	2	200	4
Skip Loader	350	2	200	4
Forklift	100	3	200	4
Trencher	75	2	200	4
Bobcat	75	4	200	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Excavator	85	0.083	0.507	0.529	0.001	0.039	0.036	73.557	0.008	0.002	Excavators
Skip Loader	350	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
Trencher	75	0.108	0.456	0.665	0.001	0.055	0.051	64.837	0.010	0.002	Trenchers
Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders

**Table 20**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Civil**

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	4.13	22.02	24.98	0.12	0.74	0.68	12441.16	0.37	0.32	12,548.9
Excavator	0.67	4.05	4.23	0.01	0.32	0.29	588.46	0.06	0.02	594.5
Skip Loader	1.27	4.47	10.05	0.02	0.36	0.33	1894.36	0.11	0.05	1,912.0
Forklift	0.37	2.55	2.53	0.00	0.18	0.16	374.36	0.03	0.01	378.1
Trencher	0.86	3.65	5.32	0.01	0.44	0.41	518.70	0.08	0.01	524.6
Bobcat	0.35	3.23	2.89	0.01	0.17	0.15	512.68	0.03	0.01	517.5
<b>Total</b>	<b>7.66</b>	<b>39.98</b>	<b>50.00</b>	<b>0.16</b>	<b>2.20</b>	<b>2.03</b>	<b>16329.72</b>	<b>0.69</b>	<b>0.42</b>	<b>16475.63</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.41	2.20	2.50	0.01	0.07	0.07	1244.12	0.04	0.03	1,254.9
Excavator	0.07	0.41	0.42	0.00	0.03	0.03	58.85	0.01	0.00	59.4
Skip Loader	0.13	0.45	1.00	0.00	0.04	0.03	189.44	0.01	0.00	191.2
Forklift	0.04	0.26	0.25	0.00	0.02	0.02	37.44	0.00	0.00	37.8
Trencher	0.09	0.36	0.53	0.00	0.04	0.04	51.87	0.01	0.00	52.5
Bobcat	0.04	0.32	0.29	0.00	0.02	0.02	51.27	0.00	0.00	51.8
<b>Total</b>	<b>0.77</b>	<b>4.00</b>	<b>5.00</b>	<b>0.02</b>	<b>0.22</b>	<b>0.20</b>	<b>1632.97</b>	<b>0.07</b>	<b>0.04</b>	<b>1647.56</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Dump Truck	4	200	N/A	1
Concrete Truck	10	200	N/A	1
Water Truck	2	200	N/A	1
Tool Truck	2	200	N/A	1
Inspection Services	2	45	N/A	1
<b>Offsite</b>				
Water Truck	2	200	N/A	18
Concrete Truck	10	200	N/A	60
Worker Commute	15	200	N/A	58

<sup>a</sup> Concrete trucks based on 20,000 CY over 200 days and 10 CY/truck

**Motor Vehicle Exhaust Emission Factors**

**Table 20**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Civil**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.01	0.07	0.00	0.00	0.00	14.16	0.00	0.00	14.31
Concrete Truck	0.00	0.03	0.17	0.00	0.01	0.00	35.40	0.00	0.00	35.78
Water Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Tool Truck	0.00	0.02	0.00	0.00	0.00	0.00	2.31	0.00	0.00	2.34
Inspection Services	0.00	0.02	0.00	0.00	0.00	0.00	2.31	0.00	0.00	2.34
<b>Onsite Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.27</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>61.26</b>	<b>0.00</b>	<b>0.00</b>	<b>61.93</b>
<b>Offsite</b>										
Water Truck	0.02	0.10	0.60	0.00	0.02	0.01	127.45	0.00	0.00	128.81
Concrete Truck	0.25	1.71	9.94	0.02	0.33	0.18	2124.15	0.01	0.07	2146.85
Worker Commute	0.15	4.37	0.48	0.01	0.09	0.00	606.44	0.04	0.02	613.36
<b>Offsite Total</b>	<b>0.42</b>	<b>6.18</b>	<b>11.01</b>	<b>0.03</b>	<b>0.43</b>	<b>0.20</b>	<b>2858.04</b>	<b>0.05</b>	<b>0.10</b>	<b>2889.02</b>
<b>Total</b>	<b>0.43</b>	<b>6.26</b>	<b>11.28</b>	<b>0.03</b>	<b>0.44</b>	<b>0.20</b>	<b>2919.30</b>	<b>0.05</b>	<b>0.10</b>	<b>2950.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.42	0.00	0.00	1.43
Concrete Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.72
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.23
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.95</b>	<b>0.00</b>	<b>0.00</b>	<b>6.01</b>
<b>Offsite</b>										
Water Truck	0.00	0.01	0.06	0.00	0.00	0.00	12.74	0.00	0.00	12.88

**Table 20**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Civil**

Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.02	0.44	0.05	0.00	0.01	0.00	60.64	0.00	0.00	61.34
<b>Offsite Total</b>	<b>0.04</b>	<b>0.62</b>	<b>1.10</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>285.80</b>	<b>0.00</b>	<b>0.01</b>	<b>288.90</b>
<b>Total</b>	<b>0.04</b>	<b>0.62</b>	<b>1.13</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>291.75</b>	<b>0.01</b>	<b>0.01</b>	<b>294.91</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Dump Truck	4	Unpaved	1	200	0.977	0.098	3.91	0.39	0.39	0.04
Concrete Truck	10	Unpaved	1	200	0.977	0.098	9.77	0.98	0.98	0.10
Water Truck	2	Unpaved	1	200	0.977	0.098	1.95	0.20	0.20	0.02
Tool Truck	2	Unpaved	1	200	0.474	0.047	0.95	0.09	0.09	0.01
Inspection Services	2	Unpaved	1	45	0.474	0.047	0.95	0.09	0.02	0.00
<b>Onsite Total</b>							<b>17.53</b>	<b>1.75</b>	<b>1.68</b>	<b>0.17</b>
<b>Offsite</b>										
Water Truck	2	Unpaved	1.5	200	0.977	0.098	2.93	0.29	0.29	0.03
Water Truck	2	Paved	16.5	200	0.003	0.001	0.11	0.03	0.01	0.00
Concrete Truck	10	Unpaved	1.5	200	0.977	0.098	14.66	1.47	1.47	0.15
Concrete Truck	10	Paved	58.5	200	0.003	0.001	1.95	0.48	0.19	0.05
Worker Commute	15	Paved	58	200	0.003	0.001	2.90	0.71	0.29	0.07
Worker Commute	15	Unpaved	1.5	200	0.474	0.047	10.66	1.07	0.00	0.00
<b>Offsite Total</b>							<b>33.21</b>	<b>4.04</b>	<b>2.25</b>	<b>0.30</b>
<b>Total</b>							<b>50.74</b>	<b>5.79</b>	<b>3.93</b>	<b>0.47</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	146	29150	1.00E-03	1.52E-04	0.15	0.02	0.01	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.15</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 20**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Civil**

<sup>d</sup> Based on handling 29,150 CY over 200 days

**Table 21**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Electrical**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.86	12.87	22.36	0.04	1.15	1.05	3,271.3
Onsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	5.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	3.61	0.36	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.86</b>	<b>12.89</b>	<b>22.36</b>	<b>0.04</b>	<b>4.76</b>	<b>1.42</b>	<b>3276.6</b>
Offsite Motor Vehicle Exhaust	0.16	4.66	0.51	0.01	0.10	0.00	654.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	14.46	1.90	
<b>Offsite Total</b>	<b>0.16</b>	<b>4.66</b>	<b>0.51</b>	<b>0.01</b>	<b>14.56</b>	<b>1.90</b>	<b>654.3</b>
<b>Total</b>	<b>3.03</b>	<b>17.55</b>	<b>22.87</b>	<b>0.04</b>	<b>19.32</b>	<b>3.31</b>	<b>3930.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.18	0.94	1.31	0.00	0.08	0.08	180.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.30	0.03	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.18</b>	<b>0.94</b>	<b>1.31</b>	<b>0.00</b>	<b>0.38</b>	<b>0.10</b>	<b>180.7</b>
Offsite Motor Vehicle Exhaust	0.02	0.47	0.05	0.00	0.01	0.00	65.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.31	0.08	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.05</b>	<b>0.00</b>	<b>0.32</b>	<b>0.08</b>	<b>65.4</b>
<b>Total</b>	<b>0.19</b>	<b>1.41</b>	<b>1.36</b>	<b>0.00</b>	<b>0.70</b>	<b>0.18</b>	<b>246.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Reach Manlift	75	2	200	4
Manlift	75	4	200	4
14 Ton Crane	250	2	20	4
150 Ton Crane	300	1	20	4
5 Ton Crane	250	1	200	3
Forklift	100	4	200	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Reach Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
14 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
150 Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
5 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts



**Table 21**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Electrical**

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Reach Manlift	0.33	1.88	2.42	0.00	0.18	0.16	304.30	0.03	0.01	307.4
Manlift	0.66	3.77	4.84	0.01	0.35	0.32	608.60	0.06	0.02	614.8
14 Ton Crane	0.70	2.11	6.02	0.01	0.21	0.19	896.47	0.06	0.02	905.0
150 Ton Crane	0.53	1.77	4.28	0.01	0.15	0.14	719.76	0.05	0.02	726.6
5 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
Forklift	0.37	2.55	2.53	0.00	0.18	0.16	374.36	0.03	0.01	378.1
<b>Total</b>	<b>2.86</b>	<b>12.87</b>	<b>22.36</b>	<b>0.04</b>	<b>1.15</b>	<b>1.05</b>	<b>3239.66</b>	<b>0.26</b>	<b>0.08</b>	<b>3271.27</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Reach Manlift	0.03	0.19	0.24	0.00	0.02	0.02	30.43	0.00	0.00	30.7
Manlift	0.07	0.38	0.48	0.00	0.04	0.03	60.86	0.01	0.00	61.5
14 Ton Crane	0.01	0.02	0.06	0.00	0.00	0.00	8.96	0.00	0.00	9.1
150 Ton Crane	0.01	0.02	0.04	0.00	0.00	0.00	7.20	0.00	0.00	7.3
5 Ton Crane	0.03	0.08	0.23	0.00	0.01	0.01	33.62	0.00	0.00	33.9
Forklift	0.04	0.26	0.25	0.00	0.02	0.02	37.44	0.00	0.00	37.8
<b>Total</b>	<b>0.18</b>	<b>0.94</b>	<b>1.31</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>178.51</b>	<b>0.02</b>	<b>0.00</b>	<b>180.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Pick-up Truck	2	200	N/A	1
Crew Truck	2	200	N/A	1
Inspection Services	2	60	N/A	1
<b>Offsite</b>				
Worker Commute	16	200	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Pick-up Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

**Table 21**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Electrical**

Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
Inspection Services	0.00	0.02	0.00	0.00	0.00	0.00	2.31	0.00	0.00	2.34
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.30</b>	<b>0.00</b>	<b>0.00</b>	<b>5.37</b>
<b>Offsite</b>										
Worker Commute	0.16	4.66	0.51	0.01	0.10	0.00	646.87	0.04	0.02	654.25
<b>Offsite Total</b>	<b>0.16</b>	<b>4.66</b>	<b>0.51</b>	<b>0.01</b>	<b>0.10</b>	<b>0.00</b>	<b>646.87</b>	<b>0.04</b>	<b>0.02</b>	<b>654.25</b>
<b>Total</b>	<b>0.16</b>	<b>4.68</b>	<b>0.51</b>	<b>0.01</b>	<b>0.10</b>	<b>0.00</b>	<b>652.17</b>	<b>0.04</b>	<b>0.02</b>	<b>659.63</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.15
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.15
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>
<b>Offsite</b>										
Worker Commute	0.02	0.47	0.05	0.00	0.01	0.00	64.69	0.00	0.00	65.43
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.05</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>64.69</b>	<b>0.00</b>	<b>0.00</b>	<b>65.43</b>
<b>Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.05</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>65.06</b>	<b>0.00</b>	<b>0.00</b>	<b>65.80</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Pick-up Truck	2	Unpaved	1	200	0.770	0.077	1.54	0.15	0.15	0.02
Crew Truck	2	Unpaved	1	200	0.564	0.056	1.13	0.11	0.11	0.01
Inspection Services	2	Unpaved	1	60	0.474	0.047	0.95	0.09	0.03	0.00
<b>Onsite Total</b>							<b>3.61</b>	<b>0.36</b>	<b>0.30</b>	<b>0.03</b>

**Table 21**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Electrical**

<b>Offsite</b>										
Worker Commute	16	Paved	58	200	0.003	0.001	3.09	0.76	0.31	0.08
Worker Commute	16	Unpaved	1.5	200	0.474	0.047	11.37	1.14	0.00	0.00
<b>Offsite Total</b>							<b>14.46</b>	<b>1.90</b>	<b>0.31</b>	<b>0.08</b>
<b>Total</b>							<b>18.07</b>	<b>2.26</b>	<b>0.60</b>	<b>0.11</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 22**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Wiring**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	2.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	1.75	0.17	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>1.75</b>	<b>0.17</b>	<b>2.3</b>
Offsite Motor Vehicle Exhaust	0.08	2.33	0.25	0.00	0.05	0.00	327.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.23	0.95	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>7.28</b>	<b>0.95</b>	<b>327.1</b>
<b>Total</b>	<b>0.08</b>	<b>2.35</b>	<b>0.26</b>	<b>0.00</b>	<b>9.03</b>	<b>1.12</b>	<b>329.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.09	0.01	0.00	0.00	0.00	13.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.06	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.06</b>	<b>0.02</b>	<b>13.1</b>
<b>Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.13</b>	<b>0.02</b>	<b>13.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 22**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Wiring**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Wiring Truck	1	80	N/A	1
Pick-up Truck	1	80	N/A	1
<b>Offsite</b>				
Worker Commute	8	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Wiring Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Pick-up Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Pick-up Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.31</b>	<b>0.00</b>	<b>0.00</b>	<b>2.34</b>
<b>Offsite</b>										
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>323.43</b>	<b>0.02</b>	<b>0.01</b>	<b>327.13</b>
<b>Total</b>	<b>0.08</b>	<b>2.35</b>	<b>0.26</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>325.74</b>	<b>0.02</b>	<b>0.01</b>	<b>329.47</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 22**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Wiring**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.09</b>
<b>Offsite</b>										
Worker Commute	0.00	0.09	0.01	0.00	0.00	0.00	12.94	0.00	0.00	13.09
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.94</b>	<b>0.00</b>	<b>0.00</b>	<b>13.09</b>
<b>Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>13.03</b>	<b>0.00</b>	<b>0.00</b>	<b>13.18</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Wiring Truck	1	Unpaved	1	80	0.977	0.098	0.98	0.10	0.04	0.00
Pick-up Truck	1	Unpaved	1	80	0.770	0.077	0.77	0.08	0.03	0.00
<b>Onsite Total</b>							<b>1.75</b>	<b>0.17</b>	<b>0.07</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	8	Paved	58	80	0.003	0.001	1.54	0.38	0.06	0.02
Worker Commute	8	Unpaved	1.5	80	0.474	0.047	5.68	0.57	0.00	0.00
<b>Offsite Total</b>							<b>7.23</b>	<b>0.95</b>	<b>0.06</b>	<b>0.02</b>
<b>Total</b>							<b>8.98</b>	<b>1.12</b>	<b>0.13</b>	<b>0.02</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 23**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Control Room**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.79	2.66	6.43	0.01	0.23	0.21	1,089.8
Onsite Motor Vehicle Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	5.5
Onsite Motor Vehicle Fugitive PM	--	--	--	--	2.93	0.29	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.79</b>	<b>2.67</b>	<b>6.45</b>	<b>0.01</b>	<b>3.17</b>	<b>0.51</b>	<b>1095.3</b>
Offsite Motor Vehicle Exhaust	0.10	2.91	0.32	0.00	0.06	0.00	408.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	9.04	1.18	
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>9.10</b>	<b>1.19</b>	<b>408.9</b>
<b>Total</b>	<b>0.90</b>	<b>5.58</b>	<b>6.76</b>	<b>0.02</b>	<b>12.26</b>	<b>1.69</b>	<b>1504.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.05	0.00	0.00	0.00	8.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.12	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>8.4</b>
Offsite Motor Vehicle Exhaust	0.00	0.12	0.01	0.00	0.00	0.00	16.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.08	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>16.4</b>
<b>Total</b>	<b>0.01</b>	<b>0.14</b>	<b>0.06</b>	<b>0.00</b>	<b>0.20</b>	<b>0.03</b>	<b>24.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30 Ton Crane	350	1	15	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30 Ton Crane	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30 Ton Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
<b>Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.43</b>	<b>0.01</b>	<b>0.23</b>	<b>0.21</b>	<b>1079.64</b>	<b>0.07</b>	<b>0.03</b>	<b>1089.84</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 23**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Control Room**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30 Ton Crane	0.01	0.02	0.05	0.00	0.00	0.00	8.10	0.00	0.00	8.2
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.10</b>	<b>0.00</b>	<b>0.00</b>	<b>8.17</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	80	N/A	1
Stake Truck	1	80	N/A	1
Wiring Truck	1	80	N/A	1
<b>Offsite</b>				
Worker Commute	10	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Wiring Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Stake Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.44</b>	<b>0.00</b>	<b>0.00</b>	<b>5.51</b>
<b>Offsite</b>										
Worker Commute	0.10	2.91	0.32	0.00	0.06	0.00	404.29	0.02	0.01	408.91
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>404.29</b>	<b>0.02</b>	<b>0.01</b>	<b>408.91</b>
<b>Total</b>	<b>0.10</b>	<b>2.92</b>	<b>0.34</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>409.74</b>	<b>0.02</b>	<b>0.01</b>	<b>414.41</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions



**Table 23**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Control Room**

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>
<b>Offsite</b>										
Worker Commute	0.00	0.12	0.01	0.00	0.00	0.00	16.17	0.00	0.00	16.36
<b>Offsite Total</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>16.17</b>	<b>0.00</b>	<b>0.00</b>	<b>16.36</b>
<b>Total</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>16.39</b>	<b>0.00</b>	<b>0.00</b>	<b>16.58</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Unpaved	1	80	0.977	0.098	0.98	0.10	0.04	0.00
Stake Truck	1	Unpaved	1	80	0.977	0.098	0.98	0.10	0.04	0.00
Wiring Truck	1	Unpaved	1	80	0.977	0.098	0.98	0.10	0.04	0.00
<b>Onsite Total</b>							<b>2.93</b>	<b>0.29</b>	<b>0.12</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	10	Paved	58	80	0.003	0.001	1.93	0.47	0.08	0.02
Worker Commute	10	Unpaved	1.5	80	0.474	0.047	7.11	0.71	0.00	0.00
<b>Offsite Total</b>							<b>9.04</b>	<b>1.18</b>	<b>0.08</b>	<b>0.02</b>
<b>Total</b>							<b>11.97</b>	<b>1.48</b>	<b>0.19</b>	<b>0.03</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

**Table 23**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Control Room**

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 24  
Substation Construction Emissions - Full Build Out - Controlled Fugitive PM  
Maintenance**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	2.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	1.69	0.17	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.69</b>	<b>0.17</b>	<b>2.3</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.61	0.47	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>3.64</b>	<b>0.47</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>5.33</b>	<b>0.64</b>	<b>165.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.08	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.06	0.01	0.00	0.00	0.00	8.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.04	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>8.2</b>
<b>Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.12</b>	<b>0.02</b>	<b>8.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 24**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Maintenance**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Foreman Truck	1	100	N/A	1
Crew Truck	2	100	N/A	1
<b>Offsite</b>				
Worker Commute	4	100	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Foreman Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.25</b>	<b>0.00</b>	<b>0.00</b>	<b>2.27</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 24**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Maintenance**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.08
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>
<b>Offsite</b>										
Worker Commute	0.00	0.06	0.01	0.00	0.00	0.00	8.09	0.00	0.00	8.18
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.09</b>	<b>0.00</b>	<b>0.00</b>	<b>8.18</b>
<b>Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.20</b>	<b>0.00</b>	<b>0.00</b>	<b>8.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Foreman Truck	1	Unpaved	1	100	0.564	0.056	0.56	0.06	0.03	0.00
Crew Truck	2	Unpaved	1	100	0.564	0.056	1.13	0.11	0.06	0.01
<b>Onsite Total</b>							<b>1.69</b>	<b>0.17</b>	<b>0.08</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	100	0.003	0.001	0.77	0.19	0.04	0.01
Worker Commute	4	Unpaved	1.5	100	0.474	0.047	2.84	0.28	0.00	0.00
<b>Offsite Total</b>							<b>3.61</b>	<b>0.47</b>	<b>0.04</b>	<b>0.01</b>
<b>Total</b>							<b>5.31</b>	<b>0.64</b>	<b>0.12</b>	<b>0.02</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 25**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Asphalting**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	5.70	21.43	50.61	0.08	1.90	1.75	7,304.9
Onsite Motor Vehicle Exhaust	0.01	0.08	0.43	0.00	0.01	0.01	94.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	25.56	2.56	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
Asphaltic Paving VOC	0.3	--	--	--	--	--	--
<b>Onsite Total</b>	<b>6.05</b>	<b>21.51</b>	<b>51.05</b>	<b>0.08</b>	<b>27.48</b>	<b>4.32</b>	<b>7399.15</b>
Offsite Motor Vehicle Exhaust	0.64	5.68	23.05	0.05	0.79	0.42	5,183.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	43.62	5.18	
<b>Offsite Total</b>	<b>0.64</b>	<b>5.68</b>	<b>23.05</b>	<b>0.05</b>	<b>44.41</b>	<b>5.60</b>	<b>5183.1</b>
<b>Total</b>	<b>6.70</b>	<b>27.19</b>	<b>74.09</b>	<b>0.13</b>	<b>71.89</b>	<b>9.92</b>	<b>12582.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.32	0.76	0.00	0.03	0.03	109.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	1.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.38	0.04	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
Asphaltic Paving VOC	0.01	--	--	--	--	--	--
<b>Onsite Total</b>	<b>0.09</b>	<b>0.32</b>	<b>0.76</b>	<b>0.00</b>	<b>0.41</b>	<b>0.06</b>	<b>110.6</b>
Offsite Motor Vehicle Exhaust	0.01	0.09	0.35	0.00	0.01	0.01	77.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.59	0.07	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.09</b>	<b>0.35</b>	<b>0.00</b>	<b>0.60</b>	<b>0.08</b>	<b>77.7</b>
<b>Total</b>	<b>0.10</b>	<b>0.41</b>	<b>1.11</b>	<b>0.00</b>	<b>1.01</b>	<b>0.14</b>	<b>188.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Paving Roller	200	2	30	10
Asphalt Paver	250	1	30	10
Tractor	150	1	30	10
Asphalt Curb Machine	250	1	30	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Paving Roller	200	0.104	0.346	0.995	0.002	0.033	0.031	152.952	0.009	0.004	Rollers
Asphalt Paver	250	0.176	0.537	1.546	0.002	0.059	0.054	194.197	0.016	0.005	Pavers
Tractor	150	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Asphalt Curb Machine	250	0.108	0.330	0.969	0.001	0.036	0.033	122.182	0.010	0.003	Paving Equipment

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 25**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Asphalting**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Paving Roller	2.08	6.92	19.89	0.03	0.67	0.61	3059.05	0.19	0.08	3,087.6
Asphalt Paver	1.76	5.37	15.46	0.02	0.59	0.54	1941.97	0.16	0.05	1,961.0
Tractor	0.79	5.84	5.57	0.01	0.29	0.27	1012.96	0.07	0.03	1,022.7
Asphalt Curb Machine	1.08	3.30	9.69	0.01	0.36	0.33	1221.82	0.10	0.03	1,233.7
<b>Total</b>	<b>5.70</b>	<b>21.43</b>	<b>50.61</b>	<b>0.08</b>	<b>1.90</b>	<b>1.75</b>	<b>7235.80</b>	<b>0.51</b>	<b>0.19</b>	<b>7304.95</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Paving Roller	0.03	0.10	0.30	0.00	0.01	0.01	45.89	0.00	0.00	46.3
Asphalt Paver	0.03	0.08	0.23	0.00	0.01	0.01	29.13	0.00	0.00	29.4
Tractor	0.01	0.09	0.08	0.00	0.00	0.00	15.19	0.00	0.00	15.3
Asphalt Curb Machine	0.02	0.05	0.15	0.00	0.01	0.00	18.33	0.00	0.00	18.5
<b>Total</b>	<b>0.09</b>	<b>0.32</b>	<b>0.76</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>108.54</b>	<b>0.01</b>	<b>0.00</b>	<b>109.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Stake Truck	1	30	N/A	1
Dump Truck	1	30	N/A	1
Crew Truck	2	30	N/A	1
Asphalt Delivery Truck	8	30	N/A	1
Aggregate Base Delivery Truck	15	30	N/A	1
<b>Offsite</b>				
Asphalt Delivery Truck	8	30	N/A	60
Aggregate Base Delivery Truck	15	30	N/A	60
Worker Commute	6	30	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 1,710 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 3,250 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Crew Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Asphalt Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 25  
Substation Construction Emissions - Full Build Out - Controlled Fugitive PM  
Asphalting**

Aggregate Base Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
<b>Offsite</b>										
Asphalt Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Aggregate Base Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Stake Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Crew Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Asphalt Delivery Truck	0.00	0.02	0.13	0.00	0.00	0.00	28.32	0.00	0.00	28.62
Aggregate Base Delivery Truck	0.01	0.04	0.25	0.00	0.01	0.00	53.10	0.00	0.00	53.67
<b>Onsite Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.43</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>93.20</b>	<b>0.00</b>	<b>0.00</b>	<b>94.20</b>
<b>Offsite</b>										
Asphalt Delivery Truck	0.20	1.37	7.95	0.02	0.26	0.14	1699.32	0.01	0.06	1717.48
Aggregate Base Delivery Truck	0.38	2.56	14.91	0.03	0.49	0.27	3186.23	0.02	0.11	3220.27
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.64</b>	<b>5.68</b>	<b>23.05</b>	<b>0.05</b>	<b>0.79</b>	<b>0.42</b>	<b>5128.13</b>	<b>0.04</b>	<b>0.17</b>	<b>5183.09</b>
<b>Total</b>	<b>0.66</b>	<b>5.76</b>	<b>23.48</b>	<b>0.05</b>	<b>0.80</b>	<b>0.43</b>	<b>5221.33</b>	<b>0.04</b>	<b>0.18</b>	<b>5277.30</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Aggregate Base Delivery Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.81
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.97</b>	<b>0.00</b>	<b>0.00</b>	<b>0.98</b>
<b>Offsite</b>										
Asphalt Delivery Truck	0.00	0.02	0.12	0.00	0.00	0.00	25.49	0.00	0.00	25.76
Aggregate Base Delivery Truck	0.01	0.04	0.22	0.00	0.01	0.00	47.79	0.00	0.00	48.30
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	3.64	0.00	0.00	3.68
<b>Offsite Total</b>	<b>0.01</b>	<b>0.09</b>	<b>0.35</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>76.92</b>	<b>0.00</b>	<b>0.00</b>	<b>77.75</b>
<b>Total</b>	<b>0.01</b>	<b>0.09</b>	<b>0.35</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>77.90</b>	<b>0.00</b>	<b>0.00</b>	<b>78.73</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**



**Table 25**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Asphalting**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Stake Truck	1	Unpaved	1	30	0.977	0.098	0.98	0.10	0.01	0.00
Dump Truck	1	Unpaved	1	30	0.977	0.098	0.98	0.10	0.01	0.00
Crew Truck	2	Unpaved	1	30	0.564	0.056	1.13	0.11	0.02	0.00
Asphalt Delivery Truck	8	Unpaved	1	30	0.977	0.098	7.82	0.78	0.12	0.01
Aggregate Base Delivery Truck	15	Unpaved	1	30	0.977	0.098	14.66	1.47	0.22	0.02
<b>Onsite Total</b>							<b>25.56</b>	<b>2.56</b>	<b>0.38</b>	<b>0.04</b>
<b>Offsite</b>										
Asphalt Delivery Truck	8	Unpaved	1.5	30	0.977	0.098	11.73	1.17	0.18	0.02
Asphalt Delivery Truck	8	Paved	58.5	30	0.003	0.001	1.56	0.38	0.02	0.01
Aggregate Base Delivery Truck	15	Unpaved	1.5	30	0.977	0.098	21.99	2.20	0.33	0.03
Aggregate Base Delivery Truck	15	Paved	58.5	30	0.003	0.001	2.92	0.72	0.04	0.01
Worker Commute	6	Paved	58	30	0.003	0.001	1.16	0.28	0.02	0.00
Worker Commute	6	Unpaved	1.5	30	0.474	0.047	4.26	0.43	0.00	0.00
<b>Offsite Total</b>							<b>43.62</b>	<b>5.18</b>	<b>0.59</b>	<b>0.07</b>
<b>Total</b>							<b>69.19</b>	<b>7.74</b>	<b>0.97</b>	<b>0.11</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Asphaltic Paving VOC Emissions**

Area Paved (acre/day) <sup>a</sup>	Emission Factor (lb/acre) <sup>b</sup>	VOC (lb/day) <sup>c</sup>
0.13	2.62	0.3

<sup>a</sup> Based on 169,000 sq. ft. of area paved in 30 days

<sup>b</sup> From CalEEMod User's Guide

<sup>c</sup> Emissions [lb/day] = Emission factor [lb/acre] x Area paved [acre/day]

**Table 26**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Transformer Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.37	9.52	19.27	0.03	0.81	0.75	2,892.7
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	2.7
Onsite Motor Vehicle Fugitive PM	--	--	--	--	2.10	0.21	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.37</b>	<b>9.53</b>	<b>19.27</b>	<b>0.03</b>	<b>2.92</b>	<b>0.96</b>	<b>2895.4</b>
Offsite Motor Vehicle Exhaust	0.06	1.75	0.19	0.00	0.04	0.00	245.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	5.42	0.71	
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>5.46</b>	<b>0.71</b>	<b>245.3</b>
<b>Total</b>	<b>2.44</b>	<b>11.28</b>	<b>19.46</b>	<b>0.04</b>	<b>8.38</b>	<b>1.67</b>	<b>3140.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.10	0.45	0.82	0.00	0.04	0.03	122.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.13	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.10</b>	<b>0.45</b>	<b>0.82</b>	<b>0.00</b>	<b>0.16</b>	<b>0.05</b>	<b>122.8</b>
Offsite Motor Vehicle Exhaust	0.00	0.10	0.01	0.00	0.00	0.00	14.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>14.7</b>
<b>Total</b>	<b>0.11</b>	<b>0.56</b>	<b>0.83</b>	<b>0.00</b>	<b>0.24</b>	<b>0.06</b>	<b>137.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Forklift	100	2	120	10
50 Ton Crane	200	2	75	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
50 Ton Crane	200	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Forklift	0.62	4.26	4.22	0.01	0.30	0.27	623.94	0.06	0.02	630.2
50 Ton Crane	1.75	5.26	15.05	0.03	0.52	0.48	2241.16	0.16	0.06	2,262.5
<b>Total</b>	<b>2.37</b>	<b>9.52</b>	<b>19.27</b>	<b>0.03</b>	<b>0.81</b>	<b>0.75</b>	<b>2865.10</b>	<b>0.21</b>	<b>0.07</b>	<b>2892.72</b>

**Table 26**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Transformer Assembly**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Forklift	0.04	0.26	0.25	0.00	0.02	0.02	37.44	0.00	0.00	37.8
50 Ton Crane	0.07	0.20	0.56	0.00	0.02	0.02	84.04	0.01	0.00	84.8
<b>Total</b>	<b>0.10</b>	<b>0.45</b>	<b>0.82</b>	<b>0.00</b>	<b>0.04</b>	<b>0.03</b>	<b>121.48</b>	<b>0.01</b>	<b>0.00</b>	<b>122.66</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	120	N/A	1
Crew Truck	2	120	N/A	1
<b>Offsite</b>				
Worker Commute	6	120	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.65</b>	<b>0.00</b>	<b>0.00</b>	<b>2.69</b>
<b>Offsite</b>										
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>242.58</b>	<b>0.01</b>	<b>0.01</b>	<b>245.34</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>245.23</b>	<b>0.01</b>	<b>0.01</b>	<b>248.03</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 26**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Transformer Assembly**

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>
<b>Offsite</b>										
Worker Commute	0.00	0.10	0.01	0.00	0.00	0.00	14.55	0.00	0.00	14.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.55</b>	<b>0.00</b>	<b>0.00</b>	<b>14.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.11</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.71</b>	<b>0.00</b>	<b>0.00</b>	<b>14.88</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Unpaved	1	120	0.977	0.098	0.98	0.10	0.06	0.01
Crew Truck	2	Unpaved	1	120	0.564	0.056	1.13	0.11	0.07	0.01
<b>Onsite Total</b>							<b>2.10</b>	<b>0.21</b>	<b>0.13</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	6	Paved	58	120	0.003	0.001	1.16	0.28	0.07	0.02
Worker Commute	6	Unpaved	1.5	120	0.474	0.047	4.26	0.43	0.00	0.00
<b>Offsite Total</b>							<b>5.42</b>	<b>0.71</b>	<b>0.07</b>	<b>0.02</b>
<b>Total</b>							<b>7.53</b>	<b>0.92</b>	<b>0.20</b>	<b>0.03</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

**Table 26**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Transformer Assembly**

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 27**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Testing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.56	0.06	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.56</b>	<b>0.06</b>	<b>0.8</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.61	0.47	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>3.64</b>	<b>0.47</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>4.20</b>	<b>0.53</b>	<b>164.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.10	0.01	0.00	0.00	0.00	14.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>14.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.12</b>	<b>0.02</b>	<b>14.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 27**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Testing**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Crew Truck	1	180	N/A	1
<b>Offsite</b>				
Worker Commute	4	180	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.75</b>	<b>0.00</b>	<b>0.00</b>	<b>0.76</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.47</b>	<b>0.01</b>	<b>0.01</b>	<b>164.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07

**Table 27**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Testing**

<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>
<b>Offsite</b>										
Worker Commute	0.00	0.10	0.01	0.00	0.00	0.00	14.55	0.00	0.00	14.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.55</b>	<b>0.00</b>	<b>0.00</b>	<b>14.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.62</b>	<b>0.00</b>	<b>0.00</b>	<b>14.79</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Crew Truck	1	Unpaved	1	180	0.564	0.056	0.56	0.06	0.05	0.01
<b>Onsite Total</b>							<b>0.56</b>	<b>0.06</b>	<b>0.05</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	180	0.003	0.001	0.77	0.19	0.07	0.02
Worker Commute	4	Unpaved	1.5	180	0.474	0.047	2.84	0.28	0.00	0.00
<b>Offsite Total</b>							<b>3.61</b>	<b>0.47</b>	<b>0.07</b>	<b>0.02</b>
<b>Total</b>							<b>4.18</b>	<b>0.53</b>	<b>0.12</b>	<b>0.02</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 28**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.06	0.01	0.00	0.00	0.00	9.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	3.79	0.38	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>3.79</b>	<b>0.38</b>	<b>9.4</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.81	0.24	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>1.82</b>	<b>0.24</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.65</b>	<b>0.07</b>	<b>0.00</b>	<b>5.61</b>	<b>0.62</b>	<b>91.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.09	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.2</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	2.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>2.0</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>2.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table 28**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Survey**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Survey Truck	2	50	N/A	4
<b>Offsite</b>				
Worker Commute	2	50	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Survey Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.06	0.01	0.00	0.00	0.00	9.24	0.00	0.00	9.37
<b>Onsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.24</b>	<b>0.00</b>	<b>0.00</b>	<b>9.37</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>

**Table 28**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Survey**

<b>Total</b>	<b>0.02</b>	<b>0.65</b>	<b>0.07</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>90.09</b>	<b>0.01</b>	<b>0.00</b>	<b>91.15</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	--------------	-------------	-------------	--------------

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.23
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.23</b>	<b>0.00</b>	<b>0.00</b>	<b>0.23</b>
<b>Offsite</b>										
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	2.02	0.00	0.00	2.04
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.02</b>	<b>0.00</b>	<b>0.00</b>	<b>2.04</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.25</b>	<b>0.00</b>	<b>0.00</b>	<b>2.28</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Survey Truck	2	Unpaved	4	50	0.474	0.047	3.79	0.38	0.09	0.01
<b>Onsite Total</b>							<b>3.79</b>	<b>0.38</b>	<b>0.09</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	50	0.003	0.001	0.39	0.09	0.01	0.00
Worker Commute	2	Unpaved	1.5	50	0.474	0.047	1.42	0.14	0.00	0.00
<b>Offsite Total</b>							<b>1.81</b>	<b>0.24</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>5.60</b>	<b>0.62</b>	<b>0.10</b>	<b>0.01</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00

**Table 28**  
**Substation Construction Emissions - Full Build Out - Controlled Fugitive PM**  
**Survey**

Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 29**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Civil**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.63	19.06	24.20	0.06	1.34	1.23	5,454.6
Onsite Motor Vehicle Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	8.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.63</b>	<b>19.07</b>	<b>24.23</b>	<b>0.06</b>	<b>1.35</b>	<b>1.24</b>	<b>5462.9</b>
Offsite Motor Vehicle Exhaust	0.12	2.60	1.84	0.01	0.10	0.03	670.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.86	0.46	
<b>Offsite Total</b>	<b>0.12</b>	<b>2.60</b>	<b>1.84</b>	<b>0.01</b>	<b>1.96</b>	<b>0.49</b>	<b>670.6</b>
<b>Total</b>	<b>3.75</b>	<b>21.67</b>	<b>26.08</b>	<b>0.06</b>	<b>3.31</b>	<b>1.72</b>	<b>6133.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.11	0.57	0.73	0.00	0.04	0.04	163.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.11</b>	<b>0.57</b>	<b>0.73</b>	<b>0.00</b>	<b>0.04</b>	<b>0.04</b>	<b>163.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.06	0.00	0.00	0.00	20.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.06	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.06</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>20.1</b>
<b>Total</b>	<b>0.11</b>	<b>0.65</b>	<b>0.78</b>	<b>0.00</b>	<b>0.10</b>	<b>0.05</b>	<b>184.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	1	60	8
Excavator	85	2	60	8
Skip Loader	350	1	60	5
Forklift	100	1	60	4
Trencher	75	1	60	4
Bobcat	75	1	60	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Excavator	85	0.083	0.507	0.529	0.001	0.039	0.036	73.557	0.008	0.002	Excavators
Skip Loader	350	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
Trencher	75	0.108	0.456	0.665	0.001	0.055	0.051	64.837	0.010	0.002	Trenchers
Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders

**Table 29**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Civil**

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	0.83	4.40	5.00	0.02	0.15	0.14	2488.23	0.07	0.06	2,509.8
Excavator	1.33	8.10	8.46	0.01	0.63	0.58	1176.91	0.12	0.03	1,189.0
Skip Loader	0.80	2.79	6.28	0.01	0.22	0.21	1183.98	0.07	0.03	1,195.0
Forklift	0.12	0.85	0.84	0.00	0.06	0.05	124.79	0.01	0.00	126.0
Trencher	0.43	1.82	2.66	0.00	0.22	0.20	259.35	0.04	0.01	262.3
Bobcat	0.12	1.08	0.96	0.00	0.06	0.05	170.89	0.01	0.00	172.5
<b>Total</b>	<b>3.63</b>	<b>19.06</b>	<b>24.20</b>	<b>0.06</b>	<b>1.34</b>	<b>1.23</b>	<b>5404.15</b>	<b>0.33</b>	<b>0.14</b>	<b>5454.62</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.02	0.13	0.15	0.00	0.00	0.00	74.65	0.00	0.00	75.3
Excavator	0.04	0.24	0.25	0.00	0.02	0.02	35.31	0.00	0.00	35.7
Skip Loader	0.02	0.08	0.19	0.00	0.01	0.01	35.52	0.00	0.00	35.9
Forklift	0.00	0.03	0.03	0.00	0.00	0.00	3.74	0.00	0.00	3.8
Trencher	0.01	0.05	0.08	0.00	0.01	0.01	7.78	0.00	0.00	7.9
Bobcat	0.00	0.03	0.03	0.00	0.00	0.00	5.13	0.00	0.00	5.2
<b>Total</b>	<b>0.11</b>	<b>0.57</b>	<b>0.73</b>	<b>0.00</b>	<b>0.04</b>	<b>0.04</b>	<b>162.12</b>	<b>0.01</b>	<b>0.00</b>	<b>163.64</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Dump Truck	1	60	N/A	0.5
Concrete Truck	1	60	N/A	0.5
Water Truck	2	60	N/A	0.5
Tool Truck	1	60	N/A	0.5
Inspection Services	1	20	N/A	0.5
<b>Offsite</b>				
Water Truck	2	60	N/A	18
Concrete Truck	1	60	N/A	60
Worker Commute	8	60	N/A	58

<sup>a</sup> Concrete trucks based on 20,000 CY over 200 days and 10 CY/truck

**Motor Vehicle Exhaust Emission Factors**

**Table 29**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Civil**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.24</b>	<b>0.00</b>	<b>0.00</b>	<b>8.33</b>
<b>Offsite</b>										
Water Truck	0.02	0.10	0.60	0.00	0.02	0.01	127.45	0.00	0.00	128.81
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.12</b>	<b>2.60</b>	<b>1.84</b>	<b>0.01</b>	<b>0.10</b>	<b>0.03</b>	<b>663.30</b>	<b>0.02</b>	<b>0.02</b>	<b>670.62</b>
<b>Total</b>	<b>0.12</b>	<b>2.62</b>	<b>1.88</b>	<b>0.01</b>	<b>0.10</b>	<b>0.03</b>	<b>671.53</b>	<b>0.02</b>	<b>0.02</b>	<b>678.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.24</b>	<b>0.00</b>	<b>0.00</b>	<b>0.24</b>
<b>Offsite</b>										
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.82	0.00	0.00	3.86

**Table 29**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Civil**

Concrete Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.37	0.00	0.00	6.44
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.70	0.00	0.00	9.81
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>19.90</b>	<b>0.00</b>	<b>0.00</b>	<b>20.12</b>
<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>20.13</b>	<b>0.00</b>	<b>0.00</b>	<b>20.36</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Dump Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Concrete Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Water Truck	2	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Tool Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Inspection Services	1	Paved	0.5	20	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Water Truck	2	Paved	17.5	60	0.003	0.001	0.12	0.03	0.00	0.00
Concrete Truck	1	Paved	59.5	60	0.003	0.001	0.20	0.05	0.01	0.00
Worker Commute	8	Paved	58	60	0.003	0.001	1.54	0.38	0.05	0.01
<b>Offsite Total</b>							<b>1.86</b>	<b>0.46</b>	<b>0.06</b>	<b>0.01</b>
<b>Total</b>							<b>1.87</b>	<b>0.46</b>	<b>0.06</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 30**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Electrical**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.77	7.52	13.97	0.02	0.68	0.63	2,076.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	2.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.77</b>	<b>7.53</b>	<b>13.97</b>	<b>0.02</b>	<b>0.69</b>	<b>0.63</b>	<b>2078.3</b>
Offsite Motor Vehicle Exhaust	0.08	2.33	0.25	0.00	0.05	0.00	327.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.54	0.38	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>1.59</b>	<b>0.38</b>	<b>327.1</b>
<b>Total</b>	<b>1.85</b>	<b>9.86</b>	<b>14.23</b>	<b>0.03</b>	<b>2.29</b>	<b>1.01</b>	<b>2405.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.06	0.26	0.49	0.00	0.02	0.02	72.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.06</b>	<b>0.26</b>	<b>0.49</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>72.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.01	0.00	0.00	0.00	11.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>11.4</b>
<b>Total</b>	<b>0.06</b>	<b>0.34</b>	<b>0.50</b>	<b>0.00</b>	<b>0.08</b>	<b>0.04</b>	<b>84.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Reach Manlift	75	1	70	5
Manlift	75	2	70	5
14 Ton Crane	250	1	70	3
150 Ton Crane	300	1	70	4
5 Ton Crane	250	1	70	3
Forklift	100	1	70	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Reach Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
14 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
150 Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
5 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts

**Table 30**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Electrical**

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Reach Manlift	0.21	1.18	1.51	0.00	0.11	0.10	190.19	0.02	0.00	192.1
Manlift	0.42	2.35	3.03	0.00	0.22	0.20	380.38	0.04	0.01	384.3
14 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
150 Ton Crane	0.53	1.77	4.28	0.01	0.15	0.14	719.76	0.05	0.02	726.6
5 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
Forklift	0.09	0.64	0.63	0.00	0.04	0.04	93.59	0.01	0.00	94.5
<b>Total</b>	<b>1.77</b>	<b>7.52</b>	<b>13.97</b>	<b>0.02</b>	<b>0.68</b>	<b>0.63</b>	<b>2056.26</b>	<b>0.16</b>	<b>0.05</b>	<b>2076.22</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Reach Manlift	0.01	0.04	0.05	0.00	0.00	0.00	6.66	0.00	0.00	6.7
Manlift	0.01	0.08	0.11	0.00	0.01	0.01	13.31	0.00	0.00	13.4
14 Ton Crane	0.01	0.03	0.08	0.00	0.00	0.00	11.77	0.00	0.00	11.9
150 Ton Crane	0.02	0.06	0.15	0.00	0.01	0.00	25.19	0.00	0.00	25.4
5 Ton Crane	0.01	0.03	0.08	0.00	0.00	0.00	11.77	0.00	0.00	11.9
Forklift	0.00	0.02	0.02	0.00	0.00	0.00	3.28	0.00	0.00	3.3
<b>Total</b>	<b>0.06</b>	<b>0.26</b>	<b>0.49</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>71.97</b>	<b>0.01</b>	<b>0.00</b>	<b>72.67</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Pick-up Truck	2	70	N/A	0.5
Crew Truck	2	70	N/A	0.5
Inspection Services	1	20	N/A	0.5
<b>Offsite</b>				
Worker Commute	8	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Pick-up Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

**Table 30**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Electrical**

Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.07</b>	<b>0.00</b>	<b>0.00</b>	<b>2.10</b>
<b>Offsite</b>										
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>323.43</b>	<b>0.02</b>	<b>0.01</b>	<b>327.13</b>
<b>Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.26</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>325.51</b>	<b>0.02</b>	<b>0.01</b>	<b>329.23</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.06</b>
<b>Offsite</b>										
Worker Commute	0.00	0.08	0.01	0.00	0.00	0.00	11.32	0.00	0.00	11.45
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>11.32</b>	<b>0.00</b>	<b>0.00</b>	<b>11.45</b>
<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>11.38</b>	<b>0.00</b>	<b>0.00</b>	<b>11.51</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Pick-up Truck	2	Paved	0.5	70	0.003	0.001	0.00	0.00	0.00	0.00
Crew Truck	2	Paved	0.5	70	0.003	0.001	0.00	0.00	0.00	0.00
Inspection Services	1	Paved	0.5	20	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 30**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Electrical**

<b>Offsite</b>										
Worker Commute	8	Paved	58	70	0.003	0.001	1.54	0.38	0.05	0.01
<b>Offsite Total</b>							<b>1.54</b>	<b>0.38</b>	<b>0.05</b>	<b>0.01</b>
<b>Total</b>							<b>1.55</b>	<b>0.38</b>	<b>0.05</b>	<b>0.01</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 31**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Wiring**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.2</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.39	0.09	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>83.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	2.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>2.5</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>2.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 31**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Wiring**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Wiring Truck	1	60	N/A	0.5
Pick-up Truck	1	60	N/A	0.5
<b>Offsite</b>				
Worker Commute	2	60	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Wiring Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Pick-up Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.15</b>	<b>0.00</b>	<b>0.00</b>	<b>1.17</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>82.01</b>	<b>0.01</b>	<b>0.00</b>	<b>82.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 31**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Wiring**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>
<b>Offsite</b>										
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.43	0.00	0.00	2.45
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.43</b>	<b>0.00</b>	<b>0.00</b>	<b>2.45</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.46</b>	<b>0.00</b>	<b>0.00</b>	<b>2.49</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Wiring Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Pick-up Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	60	0.003	0.001	0.39	0.09	0.01	0.00
<b>Offsite Total</b>							<b>0.39</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>0.39</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 32**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**MEER**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.79	2.66	6.43	0.01	0.23	0.21	1,089.8
Onsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.44</b>	<b>0.01</b>	<b>0.24</b>	<b>0.21</b>	<b>1092.6</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.84</b>	<b>3.83</b>	<b>6.56</b>	<b>0.01</b>	<b>1.03</b>	<b>0.41</b>	<b>1256.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	5.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.6</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	6.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>6.5</b>
<b>Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.04</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>12.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30 Ton Crane	350	1	10	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30 Ton Crane	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30 Ton Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
<b>Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.43</b>	<b>0.01</b>	<b>0.23</b>	<b>0.21</b>	<b>1079.64</b>	<b>0.07</b>	<b>0.03</b>	<b>1089.84</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions



**Table 32**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**MEER**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30 Ton Crane	0.00	0.01	0.03	0.00	0.00	0.00	5.40	0.00	0.00	5.4
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.40</b>	<b>0.00</b>	<b>0.00</b>	<b>5.45</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	80	N/A	0.5
Stake Truck	1	80	N/A	0.5
Wiring Truck	1	80	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Wiring Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.72</b>	<b>0.00</b>	<b>0.00</b>	<b>2.75</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.14</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>164.44</b>	<b>0.01</b>	<b>0.01</b>	<b>166.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 32**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**MEER**

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>
<b>Offsite</b>										
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.47	0.00	0.00	6.54
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.47</b>	<b>0.00</b>	<b>0.00</b>	<b>6.54</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.58</b>	<b>0.00</b>	<b>0.00</b>	<b>6.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
Stake Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
Wiring Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	80	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>0.78</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

**Table 32**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**MEER**

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 33  
Modifications to Coolwater Switchyard - Controlled Fugitive PM  
Maintenance**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	1.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>1.1</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>164.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 33  
Modifications to Coolwater Switchyard - Controlled Fugitive PM  
Maintenance**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Foreman Truck	1	40	N/A	0.5
Crew Truck	2	40	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	40	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Foreman Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.12</b>	<b>0.00</b>	<b>0.00</b>	<b>1.14</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.84</b>	<b>0.01</b>	<b>0.01</b>	<b>164.70</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 33**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Maintenance**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>	<b>0.00</b>	<b>0.00</b>	<b>3.27</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.26</b>	<b>0.00</b>	<b>0.00</b>	<b>3.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Foreman Truck	1	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
Crew Truck	2	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	40	0.003	0.001	0.77	0.19	0.02	0.00
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>0.78</b>	<b>0.19</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 34**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Testing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.4</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.04	0.00	0.00	0.00	0.00	5.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 34**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Testing**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Crew Truck	1	70	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>	<b>0.00</b>	<b>0.00</b>	<b>0.38</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.09</b>	<b>0.01</b>	<b>0.01</b>	<b>163.94</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01



**Table 34**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Testing**

<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.66</b>	<b>0.00</b>	<b>0.00</b>	<b>5.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.67</b>	<b>0.00</b>	<b>0.00</b>	<b>5.74</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Crew Truck	1	Paved	0.5	70	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	70	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 35**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.2</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.39	0.09	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>83.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table 35**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Survey**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Survey Truck	2	15	N/A	0.5
<b>Offsite</b>				
Worker Commute	2	15	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Survey Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.15</b>	<b>0.00</b>	<b>0.00</b>	<b>1.17</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>

**Table 35**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Survey**

<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>82.01</b>	<b>0.01</b>	<b>0.00</b>	<b>82.95</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	--------------	-------------	-------------	--------------

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.62</b>	<b>0.00</b>	<b>0.00</b>	<b>0.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Survey Truck	2	Paved	0.5	15	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	15	0.003	0.001	0.39	0.09	0.00	0.00
<b>Offsite Total</b>							<b>0.39</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>							<b>0.39</b>	<b>0.10</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00

**Table 35**  
**Modifications to Coolwater Switchyard - Controlled Fugitive PM**  
**Survey**

Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 36**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Civil**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.83	20.16	25.45	0.06	1.38	1.27	6,082.1
Onsite Motor Vehicle Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	8.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.83</b>	<b>20.17</b>	<b>25.48</b>	<b>0.06</b>	<b>1.39</b>	<b>1.27</b>	<b>6090.4</b>
Offsite Motor Vehicle Exhaust	0.14	3.19	1.91	0.01	0.11	0.03	752.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2.25	0.55	
<b>Offsite Total</b>	<b>0.14</b>	<b>3.19</b>	<b>1.91</b>	<b>0.01</b>	<b>2.36</b>	<b>0.58</b>	<b>752.4</b>
<b>Total</b>	<b>3.98</b>	<b>23.36</b>	<b>27.39</b>	<b>0.07</b>	<b>3.75</b>	<b>1.85</b>	<b>6842.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.19	1.01	1.27	0.00	0.07	0.06	304.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.19</b>	<b>1.01</b>	<b>1.27</b>	<b>0.00</b>	<b>0.07</b>	<b>0.06</b>	<b>304.5</b>
Offsite Motor Vehicle Exhaust	0.01	0.16	0.10	0.00	0.01	0.00	37.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.11	0.03	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.10</b>	<b>0.00</b>	<b>0.12</b>	<b>0.03</b>	<b>37.6</b>
<b>Total</b>	<b>0.20</b>	<b>1.17</b>	<b>1.37</b>	<b>0.00</b>	<b>0.19</b>	<b>0.09</b>	<b>342.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	1	100	10
Excavator	85	2	100	8
Skip Loader	350	1	100	5
Forklift	100	1	100	4
Trencher	75	1	100	4
Bobcat	75	1	100	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Excavator	85	0.083	0.507	0.529	0.001	0.039	0.036	73.557	0.008	0.002	Excavators
Skip Loader	350	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
Trencher	75	0.108	0.456	0.665	0.001	0.055	0.051	64.837	0.010	0.002	Trenchers
Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders

**Table 36**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Civil**

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	1.03	5.51	6.25	0.03	0.19	0.17	3110.29	0.09	0.08	3,137.2
Excavator	1.33	8.10	8.46	0.01	0.63	0.58	1176.91	0.12	0.03	1,189.0
Skip Loader	0.80	2.79	6.28	0.01	0.22	0.21	1183.98	0.07	0.03	1,195.0
Forklift	0.12	0.85	0.84	0.00	0.06	0.05	124.79	0.01	0.00	126.0
Trencher	0.43	1.82	2.66	0.00	0.22	0.20	259.35	0.04	0.01	262.3
Bobcat	0.12	1.08	0.96	0.00	0.06	0.05	170.89	0.01	0.00	172.5
<b>Total</b>	<b>3.83</b>	<b>20.16</b>	<b>25.45</b>	<b>0.06</b>	<b>1.38</b>	<b>1.27</b>	<b>6026.21</b>	<b>0.35</b>	<b>0.16</b>	<b>6082.06</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.05	0.28	0.31	0.00	0.01	0.01	155.51	0.00	0.00	156.9
Excavator	0.07	0.41	0.42	0.00	0.03	0.03	58.85	0.01	0.00	59.4
Skip Loader	0.04	0.14	0.31	0.00	0.01	0.01	59.20	0.00	0.00	59.8
Forklift	0.01	0.04	0.04	0.00	0.00	0.00	6.24	0.00	0.00	6.3
Trencher	0.02	0.09	0.13	0.00	0.01	0.01	12.97	0.00	0.00	13.1
Bobcat	0.01	0.05	0.05	0.00	0.00	0.00	8.54	0.00	0.00	8.6
<b>Total</b>	<b>0.19</b>	<b>1.01</b>	<b>1.27</b>	<b>0.00</b>	<b>0.07</b>	<b>0.06</b>	<b>301.31</b>	<b>0.02</b>	<b>0.01</b>	<b>304.10</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Dump Truck	1	100	N/A	0.5
Concrete Truck	1	100	N/A	0.5
Water Truck	2	100	N/A	0.5
Tool Truck	1	100	N/A	0.5
Inspection Services	1	20	N/A	0.5
<b>Offsite</b>				
Water Truck	2	100	N/A	18
Concrete Truck	1	100	N/A	60
Worker Commute	10	100	N/A	58

<sup>a</sup> Concrete trucks based on 20,000 CY over 200 days and 10 CY/truck

**Motor Vehicle Exhaust Emission Factors**

**Table 36**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Civil**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.24</b>	<b>0.00</b>	<b>0.00</b>	<b>8.33</b>
<b>Offsite</b>										
Water Truck	0.02	0.10	0.60	0.00	0.02	0.01	127.45	0.00	0.00	128.81
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.10	2.91	0.32	0.00	0.06	0.00	404.29	0.02	0.01	408.91
<b>Offsite Total</b>	<b>0.14</b>	<b>3.19</b>	<b>1.91</b>	<b>0.01</b>	<b>0.11</b>	<b>0.03</b>	<b>744.16</b>	<b>0.03</b>	<b>0.02</b>	<b>752.40</b>
<b>Total</b>	<b>0.14</b>	<b>3.20</b>	<b>1.94</b>	<b>0.01</b>	<b>0.11</b>	<b>0.03</b>	<b>752.39</b>	<b>0.03</b>	<b>0.03</b>	<b>760.73</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.18
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.39</b>	<b>0.00</b>	<b>0.00</b>	<b>0.39</b>
<b>Offsite</b>										
Water Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.37	0.00	0.00	6.44



**Table 36**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Civil**

Concrete Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.01	0.15	0.02	0.00	0.00	0.00	20.21	0.00	0.00	20.45
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.10</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>37.21</b>	<b>0.00</b>	<b>0.00</b>	<b>37.62</b>
<b>Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.10</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>37.60</b>	<b>0.00</b>	<b>0.00</b>	<b>38.01</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Dump Truck	1	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Concrete Truck	1	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Water Truck	2	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Tool Truck	1	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Inspection Services	1	Paved	0.5	20	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Water Truck	2	Paved	17.5	100	0.003	0.001	0.12	0.03	0.01	0.00
Concrete Truck	1	Paved	59.5	100	0.003	0.001	0.20	0.05	0.01	0.00
Worker Commute	10	Paved	58	100	0.003	0.001	1.93	0.47	0.10	0.02
<b>Offsite Total</b>							<b>2.25</b>	<b>0.55</b>	<b>0.11</b>	<b>0.03</b>
<b>Total</b>							<b>2.26</b>	<b>0.55</b>	<b>0.11</b>	<b>0.03</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 37**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Electrical**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.77	7.52	13.97	0.02	0.68	0.63	2,076.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	2.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.77</b>	<b>7.53</b>	<b>13.97</b>	<b>0.02</b>	<b>0.69</b>	<b>0.63</b>	<b>2078.3</b>
Offsite Motor Vehicle Exhaust	0.10	2.91	0.32	0.00	0.06	0.00	408.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.93	0.47	
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>1.99</b>	<b>0.48</b>	<b>408.9</b>
<b>Total</b>	<b>1.87</b>	<b>10.44</b>	<b>14.29</b>	<b>0.03</b>	<b>2.68</b>	<b>1.11</b>	<b>2487.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.38	0.70	0.00	0.03	0.03	103.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.09</b>	<b>0.38</b>	<b>0.70</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>103.9</b>
Offsite Motor Vehicle Exhaust	0.01	0.15	0.02	0.00	0.00	0.00	20.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.02	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.02</b>	<b>0.00</b>	<b>0.10</b>	<b>0.02</b>	<b>20.4</b>
<b>Total</b>	<b>0.09</b>	<b>0.52</b>	<b>0.71</b>	<b>0.00</b>	<b>0.13</b>	<b>0.06</b>	<b>124.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Reach Manlift	75	1	100	5
Manlift	75	2	100	5
14 Ton Crane	250	1	100	3
150 Ton Crane	300	1	100	4
5 Ton Crane	250	1	100	3
Forklift	100	1	100	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Reach Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
14 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
150 Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
5 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts

**Table 37**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Electrical**

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Reach Manlift	0.21	1.18	1.51	0.00	0.11	0.10	190.19	0.02	0.00	192.1
Manlift	0.42	2.35	3.03	0.00	0.22	0.20	380.38	0.04	0.01	384.3
14 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
150 Ton Crane	0.53	1.77	4.28	0.01	0.15	0.14	719.76	0.05	0.02	726.6
5 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
Forklift	0.09	0.64	0.63	0.00	0.04	0.04	93.59	0.01	0.00	94.5
<b>Total</b>	<b>1.77</b>	<b>7.52</b>	<b>13.97</b>	<b>0.02</b>	<b>0.68</b>	<b>0.63</b>	<b>2056.26</b>	<b>0.16</b>	<b>0.05</b>	<b>2076.22</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Reach Manlift	0.01	0.06	0.08	0.00	0.01	0.01	9.51	0.00	0.00	9.6
Manlift	0.02	0.12	0.15	0.00	0.01	0.01	19.02	0.00	0.00	19.2
14 Ton Crane	0.01	0.04	0.11	0.00	0.00	0.00	16.81	0.00	0.00	17.0
150 Ton Crane	0.03	0.09	0.21	0.00	0.01	0.01	35.99	0.00	0.00	36.3
5 Ton Crane	0.01	0.04	0.11	0.00	0.00	0.00	16.81	0.00	0.00	17.0
Forklift	0.00	0.03	0.03	0.00	0.00	0.00	4.68	0.00	0.00	4.7
<b>Total</b>	<b>0.09</b>	<b>0.38</b>	<b>0.70</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>102.81</b>	<b>0.01</b>	<b>0.00</b>	<b>103.81</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Pick-up Truck	2	100	N/A	0.5
Crew Truck	2	100	N/A	0.5
Inspection Services	1	20	N/A	0.5
<b>Offsite</b>				
Worker Commute	10	100	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Pick-up Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

**Table 37**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Electrical**

Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.07</b>	<b>0.00</b>	<b>0.00</b>	<b>2.10</b>
<b>Offsite</b>										
Worker Commute	0.10	2.91	0.32	0.00	0.06	0.00	404.29	0.02	0.01	408.91
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>404.29</b>	<b>0.02</b>	<b>0.01</b>	<b>408.91</b>
<b>Total</b>	<b>0.10</b>	<b>2.92</b>	<b>0.32</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>406.37</b>	<b>0.02</b>	<b>0.01</b>	<b>411.01</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>
<b>Offsite</b>										
Worker Commute	0.01	0.15	0.02	0.00	0.00	0.00	20.21	0.00	0.00	20.45
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>20.21</b>	<b>0.00</b>	<b>0.00</b>	<b>20.45</b>
<b>Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>20.30</b>	<b>0.00</b>	<b>0.00</b>	<b>20.53</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Pick-up Truck	2	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Crew Truck	2	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Inspection Services	1	Paved	0.5	20	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 37**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Electrical**

<b>Offsite</b>										
Worker Commute	10	Paved	58	100	0.003	0.001	1.93	0.47	0.10	0.02
<b>Offsite Total</b>							<b>1.93</b>	<b>0.47</b>	<b>0.10</b>	<b>0.02</b>
<b>Total</b>							<b>1.94</b>	<b>0.48</b>	<b>0.10</b>	<b>0.02</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 38**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Wiring**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.2</b>
Offsite Motor Vehicle Exhaust	0.06	1.75	0.19	0.00	0.04	0.00	245.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.16	0.28	
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>1.19</b>	<b>0.29</b>	<b>245.3</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>1.20</b>	<b>0.29</b>	<b>246.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	7.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>7.4</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>7.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 38**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Wiring**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Wiring Truck	1	60	N/A	0.5
Pick-up Truck	1	60	N/A	0.5
<b>Offsite</b>				
Worker Commute	6	60	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Wiring Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Pick-up Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.15</b>	<b>0.00</b>	<b>0.00</b>	<b>1.17</b>
<b>Offsite</b>										
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>242.58</b>	<b>0.01</b>	<b>0.01</b>	<b>245.34</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>243.73</b>	<b>0.01</b>	<b>0.01</b>	<b>246.52</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 38**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Wiring**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>
<b>Offsite</b>										
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	7.28	0.00	0.00	7.36
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.28</b>	<b>0.00</b>	<b>0.00</b>	<b>7.36</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.31</b>	<b>0.00</b>	<b>0.00</b>	<b>7.40</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Wiring Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Pick-up Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	6	Paved	58	60	0.003	0.001	1.16	0.28	0.03	0.01
<b>Offsite Total</b>							<b>1.16</b>	<b>0.28</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>1.16</b>	<b>0.29</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 39**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Control Room**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.79	2.66	6.43	0.01	0.23	0.21	1,089.8
Onsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.44</b>	<b>0.01</b>	<b>0.24</b>	<b>0.21</b>	<b>1092.6</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.84</b>	<b>3.83</b>	<b>6.56</b>	<b>0.01</b>	<b>1.03</b>	<b>0.41</b>	<b>1256.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.05	0.00	0.00	0.00	8.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	6.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>6.5</b>
<b>Total</b>	<b>0.01</b>	<b>0.07</b>	<b>0.05</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>14.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30 Ton Crane	350	1	15	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30 Ton Crane	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30 Ton Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
<b>Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.43</b>	<b>0.01</b>	<b>0.23</b>	<b>0.21</b>	<b>1079.64</b>	<b>0.07</b>	<b>0.03</b>	<b>1089.84</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 39**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Control Room**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30 Ton Crane	0.01	0.02	0.05	0.00	0.00	0.00	8.10	0.00	0.00	8.2
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.10</b>	<b>0.00</b>	<b>0.00</b>	<b>8.17</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	80	N/A	0.5
Stake Truck	1	80	N/A	0.5
Wiring Truck	1	80	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Wiring Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.72</b>	<b>0.00</b>	<b>0.00</b>	<b>2.75</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.14</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>164.44</b>	<b>0.01</b>	<b>0.01</b>	<b>166.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 39**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Control Room**

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>
<b>Offsite</b>										
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.47	0.00	0.00	6.54
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.47</b>	<b>0.00</b>	<b>0.00</b>	<b>6.54</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.58</b>	<b>0.00</b>	<b>0.00</b>	<b>6.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
Stake Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
Wiring Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	80	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>0.78</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

**Table 39**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Control Room**

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 40**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Maintenance**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	1.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>1.1</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>164.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 40**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Maintenance**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Foreman Truck	1	40	N/A	0.5
Crew Truck	2	40	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	40	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Foreman Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.12</b>	<b>0.00</b>	<b>0.00</b>	<b>1.14</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.84</b>	<b>0.01</b>	<b>0.01</b>	<b>164.70</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 40**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Maintenance**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>	<b>0.00</b>	<b>0.00</b>	<b>3.27</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.26</b>	<b>0.00</b>	<b>0.00</b>	<b>3.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Foreman Truck	1	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
Crew Truck	2	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	40	0.003	0.001	0.77	0.19	0.02	0.00
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>0.78</b>	<b>0.19</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 41**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Transformer Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.67	7.42	13.25	0.02	0.61	0.56	1,987.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.01	0.00	0.00	0.00	2.5
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.67</b>	<b>7.42</b>	<b>13.26</b>	<b>0.02</b>	<b>0.61</b>	<b>0.56</b>	<b>1990.3</b>
Offsite Motor Vehicle Exhaust	0.06	1.75	0.19	0.00	0.04	0.00	245.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.16	0.28	
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>1.19</b>	<b>0.29</b>	<b>245.3</b>
<b>Total</b>	<b>1.74</b>	<b>9.17</b>	<b>13.45</b>	<b>0.03</b>	<b>1.81</b>	<b>0.85</b>	<b>2235.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.08	0.37	0.59	0.00	0.03	0.03	88.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.08</b>	<b>0.37</b>	<b>0.59</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>88.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.10	0.01	0.00	0.00	0.00	14.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>14.7</b>
<b>Total</b>	<b>0.08</b>	<b>0.48</b>	<b>0.60</b>	<b>0.00</b>	<b>0.10</b>	<b>0.04</b>	<b>103.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Forklift	100	2	120	10
50 Ton Crane	200	2	75	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
50 Ton Crane	200	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**



**Table 41**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Transformer Assembly**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Forklift	0.62	4.26	4.22	0.01	0.30	0.27	623.94	0.06	0.02	630.2
50 Ton Crane	1.05	3.16	9.03	0.02	0.31	0.29	1344.70	0.09	0.03	1,357.5
<b>Total</b>	<b>1.67</b>	<b>7.42</b>	<b>13.25</b>	<b>0.02</b>	<b>0.61</b>	<b>0.56</b>	<b>1968.64</b>	<b>0.15</b>	<b>0.05</b>	<b>1987.71</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Forklift	0.04	0.26	0.25	0.00	0.02	0.02	37.44	0.00	0.00	37.8
50 Ton Crane	0.04	0.12	0.34	0.00	0.01	0.01	50.43	0.00	0.00	50.9
<b>Total</b>	<b>0.08</b>	<b>0.37</b>	<b>0.59</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>87.86</b>	<b>0.01</b>	<b>0.00</b>	<b>88.72</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	120	N/A	0.5
Crew Truck	2	120	N/A	0.5
<b>Offsite</b>				
Worker Commute	6	120	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										

**Table 41**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Transformer Assembly**

Carry-all Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.52</b>	<b>0.00</b>	<b>0.00</b>	<b>2.55</b>
<b>Offsite</b>										
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>242.58</b>	<b>0.01</b>	<b>0.01</b>	<b>245.34</b>
<b>Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.20</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>245.09</b>	<b>0.01</b>	<b>0.01</b>	<b>247.89</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.05
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.15</b>	<b>0.00</b>	<b>0.00</b>	<b>0.15</b>
<b>Offsite</b>										
Worker Commute	0.00	0.10	0.01	0.00	0.00	0.00	14.55	0.00	0.00	14.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.55</b>	<b>0.00</b>	<b>0.00</b>	<b>14.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.71</b>	<b>0.00</b>	<b>0.00</b>	<b>14.87</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Paved	0.5	120	0.003	0.001	0.00	0.00	0.00	0.00
Crew Truck	2	Paved	0.5	120	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	6	Paved	58	120	0.003	0.001	1.16	0.28	0.07	0.02
<b>Offsite Total</b>							<b>1.16</b>	<b>0.28</b>	<b>0.07</b>	<b>0.02</b>
<b>Total</b>							<b>1.16</b>	<b>0.29</b>	<b>0.07</b>	<b>0.02</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 41**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Transformer Assembly**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 42**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Testing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.4</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.04	0.00	0.00	0.00	0.00	5.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 42**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Testing**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Crew Truck	1	70	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>	<b>0.00</b>	<b>0.00</b>	<b>0.38</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.09</b>	<b>0.01</b>	<b>0.01</b>	<b>163.94</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01

**Table 42**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Testing**

<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.66</b>	<b>0.00</b>	<b>0.00</b>	<b>5.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.67</b>	<b>0.00</b>	<b>0.00</b>	<b>5.74</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Crew Truck	1	Paved	0.5	70	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	70	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 43**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.2</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.39	0.09	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>83.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table 43**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Survey**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Survey Truck	2	15	N/A	0.5
<b>Offsite</b>				
Worker Commute	2	15	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Survey Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.15</b>	<b>0.00</b>	<b>0.00</b>	<b>1.17</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>



**Table 43**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Survey**

<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>82.01</b>	<b>0.01</b>	<b>0.00</b>	<b>82.95</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	--------------	-------------	-------------	--------------

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.62</b>	<b>0.00</b>	<b>0.00</b>	<b>0.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Survey Truck	2	Paved	0.5	15	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	15	0.003	0.001	0.39	0.09	0.00	0.00
<b>Offsite Total</b>							<b>0.39</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>							<b>0.39</b>	<b>0.10</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00

**Table 43**  
**Modifications to Lugo Substation - Controlled Fugitive PM**  
**Survey**

Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 44**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.22	6.36	0.76	0.01	0.12	0.00	907.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	79.73	8.42	
<b>Offsite Total</b>	<b>0.22</b>	<b>6.36</b>	<b>0.76</b>	<b>0.01</b>	<b>79.85</b>	<b>8.43</b>	<b>907.1</b>
<b>Total</b>	<b>0.22</b>	<b>6.36</b>	<b>0.76</b>	<b>0.01</b>	<b>79.85</b>	<b>8.43</b>	<b>907.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.01	0.16	0.02	0.00	0.00	0.00	22.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.99	0.21	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.00</b>	<b>2.00</b>	<b>0.21</b>	<b>22.7</b>
<b>Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.00</b>	<b>2.00</b>	<b>0.21</b>	<b>22.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table 44**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Survey**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	8	50	N/A	27
Worker Commute	16	50	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88
Worker Commute	0.16	4.66	0.51	0.01	0.10	0.00	646.87	0.04	0.02	654.25

**Table 44**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Survey**

<b>Offsite Total</b>	<b>0.22</b>	<b>6.36</b>	<b>0.76</b>	<b>0.01</b>	<b>0.12</b>	<b>0.00</b>	<b>896.24</b>	<b>0.05</b>	<b>0.03</b>	<b>907.13</b>
<b>Total</b>	<b>0.22</b>	<b>6.36</b>	<b>0.76</b>	<b>0.01</b>	<b>0.12</b>	<b>0.00</b>	<b>896.24</b>	<b>0.05</b>	<b>0.03</b>	<b>907.13</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	6.23	0.00	0.00	6.32
Worker Commute	0.00	0.12	0.01	0.00	0.00	0.00	16.17	0.00	0.00	16.36
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.41</b>	<b>0.00</b>	<b>0.00</b>	<b>22.68</b>
<b>Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.41</b>	<b>0.00</b>	<b>0.00</b>	<b>22.68</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	8	Unpaved	17	50	0.564	0.056	76.64	7.66	1.92	0.19
1-Ton Truck, 4x4	8	Paved	10	50						
Worker Commute	16	Paved	58	50	0.003	0.001	3.09	0.76	0.08	0.02
<b>Offsite Total</b>							<b>79.73</b>	<b>8.42</b>	<b>1.99</b>	<b>0.21</b>
<b>Total</b>							<b>79.73</b>	<b>8.42</b>	<b>1.99</b>	<b>0.21</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 44**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Survey**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 45**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Construction and Materials Yards**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.91	3.00	7.11	0.01	0.25	0.23	1,297.0
Onsite Motor Vehicle Exhaust	0.04	0.33	1.46	0.00	0.05	0.03	324.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.32	0.08	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.95</b>	<b>3.33</b>	<b>8.57</b>	<b>0.02</b>	<b>0.62</b>	<b>0.34</b>	<b>1621.8</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total/Yard</b>	<b>0.99</b>	<b>4.49</b>	<b>8.70</b>	<b>0.02</b>	<b>1.42</b>	<b>0.53</b>	<b>1785.4</b>
<b>Total for 8 Yards</b>	<b>7.89</b>	<b>35.93</b>	<b>69.59</b>	<b>0.15</b>	<b>11.37</b>	<b>4.22</b>	<b>14283.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.41	1.37	3.25	0.01	0.11	0.11	592.1
Onsite Motor Vehicle Exhaust	0.02	0.15	0.67	0.00	0.02	0.01	148.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.15	0.04	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.43</b>	<b>1.52</b>	<b>3.91</b>	<b>0.01</b>	<b>0.29</b>	<b>0.15</b>	<b>740.4</b>
Offsite Motor Vehicle Exhaust	0.02	0.53	0.06	0.00	0.01	0.00	74.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.35	0.09	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.53</b>	<b>0.06</b>	<b>0.00</b>	<b>0.36</b>	<b>0.09</b>	<b>74.7</b>
<b>Total/Yard</b>	<b>0.45</b>	<b>2.05</b>	<b>3.97</b>	<b>0.01</b>	<b>0.65</b>	<b>0.24</b>	<b>815.0</b>
<b>Total for 8 Yards</b>	<b>3.60</b>	<b>16.40</b>	<b>31.77</b>	<b>0.07</b>	<b>5.19</b>	<b>1.93</b>	<b>6520.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
R/T Forklift	200	1	913	5
Boom/Crane Truck	350	1	913	5

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
R/T Forklift	200	0.049	0.157	0.351	0.001	0.012	0.011	77.053	0.004	0.002	Forklifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Table 45**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Construction and Materials Yards**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
R/T Forklift	0.24	0.78	1.76	0.00	0.06	0.05	385.26	0.02	0.01	388.8
Boom/Crane Truck	0.66	2.21	5.36	0.01	0.19	0.18	899.70	0.06	0.02	908.2
<b>Total</b>	<b>0.91</b>	<b>3.00</b>	<b>7.11</b>	<b>0.01</b>	<b>0.25</b>	<b>0.23</b>	<b>1284.96</b>	<b>0.08</b>	<b>0.03</b>	<b>1297.03</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
R/T Forklift	0.11	0.36	0.80	0.00	0.03	0.02	175.87	0.01	0.00	177.5
Boom/Crane Truck	0.30	1.01	2.44	0.00	0.09	0.08	410.71	0.03	0.01	414.6
<b>Total</b>	<b>0.41</b>	<b>1.37</b>	<b>3.25</b>	<b>0.01</b>	<b>0.11</b>	<b>0.11</b>	<b>586.58</b>	<b>0.04</b>	<b>0.02</b>	<b>592.09</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh. <sup>a</sup>
<b>Onsite</b>				
1-Ton Truck, 4x4	1	913	4	10
Boom/Crane Truck	1	913	5	12.5
Water Truck	2	913	10	25
Jet A Fuel Truck	1	913	4	10
Truck, Semi Tractor	1	913	6	15
<b>Offsite</b>				
Worker Commute	4	913	N/A	58

<sup>a</sup> Onsite travel based on 25% use at 10 mph average speed

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Jet A Fuel Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Truck, Semi Tractor	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04



**Table 45**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Construction and Materials Yards**

<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
1-Ton Truck, 4x4	0.00	0.08	0.01	0.00	0.00	0.00	11.55	0.00	0.00	11.71
Boom/Crane Truck	0.01	0.04	0.21	0.00	0.01	0.00	44.25	0.00	0.00	44.73
Water Truck	0.02	0.14	0.83	0.00	0.03	0.02	177.01	0.00	0.01	178.90
Jet A Fuel Truck	0.00	0.03	0.17	0.00	0.01	0.00	35.40	0.00	0.00	35.78
Truck, Semi Tractor	0.01	0.04	0.25	0.00	0.01	0.00	53.10	0.00	0.00	53.67
<b>Onsite Total</b>	<b>0.04</b>	<b>0.33</b>	<b>1.46</b>	<b>0.00</b>	<b>0.05</b>	<b>0.03</b>	<b>321.32</b>	<b>0.00</b>	<b>0.01</b>	<b>324.79</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.08</b>	<b>1.49</b>	<b>1.59</b>	<b>0.01</b>	<b>0.07</b>	<b>0.03</b>	<b>483.03</b>	<b>0.01</b>	<b>0.02</b>	<b>488.35</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
1-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	5.27	0.00	0.00	5.34
Boom/Crane Truck	0.00	0.02	0.09	0.00	0.00	0.00	20.20	0.00	0.00	20.42
Water Truck	0.01	0.06	0.38	0.00	0.01	0.01	80.81	0.00	0.00	81.67
Jet A Fuel Truck	0.00	0.01	0.08	0.00	0.00	0.00	16.16	0.00	0.00	16.33
Truck, Semi Tractor	0.00	0.02	0.11	0.00	0.00	0.00	24.24	0.00	0.00	24.50
<b>Onsite Total</b>	<b>0.02</b>	<b>0.15</b>	<b>0.67</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>146.68</b>	<b>0.00</b>	<b>0.01</b>	<b>148.27</b>
<b>Offsite</b>										
Worker Commute	0.02	0.53	0.06	0.00	0.01	0.00	73.82	0.00	0.00	74.67
<b>Offsite Total</b>	<b>0.02</b>	<b>0.53</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>73.82</b>	<b>0.00</b>	<b>0.00</b>	<b>74.67</b>
<b>Total</b>	<b>0.04</b>	<b>0.68</b>	<b>0.72</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>220.51</b>	<b>0.01</b>	<b>0.01</b>	<b>222.93</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 45**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Construction and Materials Yards**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
1-Ton Truck, 4x4	1	Paved	10	913	0.003	0.001	0.03	0.01	0.02	0.00
Boom/Crane Truck	1	Paved	12.5	913	0.003	0.001	0.04	0.01	0.02	0.00
Water Truck	2	Paved	25	913	0.003	0.001	0.17	0.04	0.08	0.02
Jet A Fuel Truck	1	Paved	10	913	0.003	0.001	0.03	0.01	0.02	0.00
Truck, Semi Tractor	1	Paved	15	913	0.003	0.001	0.05	0.01	0.02	0.01
<b>Onsite Total</b>							<b>0.32</b>	<b>0.08</b>	<b>0.15</b>	<b>0.04</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	913	0.003	0.001	0.77	0.19	0.35	0.09
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.35</b>	<b>0.09</b>
<b>Total</b>							<b>1.10</b>	<b>0.27</b>	<b>0.50</b>	<b>0.12</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 46**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Right-of-Way Clearing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	12.06	42.79	92.13	0.18	3.38	3.11	17,652.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	72.85	32.56	
<b>Onsite Total</b>	<b>12.06</b>	<b>42.79</b>	<b>92.13</b>	<b>0.18</b>	<b>76.23</b>	<b>35.67</b>	<b>17652.9</b>
Offsite Motor Vehicle Exhaust	0.25	5.48	3.30	0.01	0.19	0.05	1,298.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	134.56	13.92	
<b>Offsite Total</b>	<b>0.25</b>	<b>5.48</b>	<b>3.30</b>	<b>0.01</b>	<b>134.75</b>	<b>13.97</b>	<b>1298.6</b>
<b>Total</b>	<b>12.30</b>	<b>48.27</b>	<b>95.43</b>	<b>0.20</b>	<b>210.98</b>	<b>49.65</b>	<b>18951.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.42	1.50	3.22	0.01	0.12	0.11	617.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	2.55	1.14	
<b>Onsite Total</b>	<b>0.42</b>	<b>1.50</b>	<b>3.22</b>	<b>0.01</b>	<b>2.67</b>	<b>1.25</b>	<b>617.9</b>
Offsite Motor Vehicle Exhaust	0.01	0.19	0.12	0.00	0.01	0.00	45.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	4.71	0.49	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.19</b>	<b>0.12</b>	<b>0.00</b>	<b>4.72</b>	<b>0.49</b>	<b>45.5</b>
<b>Total</b>	<b>0.43</b>	<b>1.69</b>	<b>3.34</b>	<b>0.01</b>	<b>7.38</b>	<b>1.74</b>	<b>663.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	350	3	70	7
Track Type Dozer	350	3	70	7
Road Grader	350	3	70	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	350	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes
Track Type Dozer	350	0.218	0.790	1.742	0.003	0.067	0.061	258.997	0.020	0.007	Crawler Tractors
Road Grader	350	0.158	0.552	1.238	0.002	0.045	0.041	229.278	0.014	0.006	Graders

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	4.16	14.61	29.56	0.08	1.04	0.96	7235.42	0.38	0.19	7,301.5
Track Type Dozer	4.58	16.59	36.58	0.05	1.40	1.29	5438.93	0.41	0.14	5,491.5

**Table 46**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Right-of-Way Clearing**

Road Grader	3.31	11.59	25.99	0.05	0.94	0.86	4814.84	0.30	0.13	4,859.9
<b>Total</b>	<b>12.06</b>	<b>42.79</b>	<b>92.13</b>	<b>0.18</b>	<b>3.38</b>	<b>3.11</b>	<b>17489.19</b>	<b>1.09</b>	<b>0.45</b>	<b>17652.89</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.15	0.51	1.03	0.00	0.04	0.03	253.24	0.01	0.01	255.6
Track Type Dozer	0.16	0.58	1.28	0.00	0.05	0.05	190.36	0.01	0.00	192.2
Road Grader	0.12	0.41	0.91	0.00	0.03	0.03	168.52	0.01	0.00	170.1
<b>Total</b>	<b>0.42</b>	<b>1.50</b>	<b>3.22</b>	<b>0.01</b>	<b>0.12</b>	<b>0.11</b>	<b>612.12</b>	<b>0.04</b>	<b>0.02</b>	<b>617.85</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	3	70	N/A	27
Water Truck	6	70	N/A	27
Lowboy Truck/Trailer	3	70	N/A	1
Worker Commute	15	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 46**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Right-of-Way Clearing**

1-Ton Truck, 4x4	0.02	0.64	0.09	0.00	0.01	0.00	93.51	0.01	0.00	94.83
Water Truck	0.07	0.46	2.68	0.01	0.09	0.05	573.52	0.00	0.02	579.65
Lowboy Truck/Trailer	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.15	4.37	0.48	0.01	0.09	0.00	606.44	0.04	0.02	613.36
<b>Offsite Total</b>	<b>0.25</b>	<b>5.48</b>	<b>3.30</b>	<b>0.01</b>	<b>0.19</b>	<b>0.05</b>	<b>1284.10</b>	<b>0.05</b>	<b>0.04</b>	<b>1298.57</b>
<b>Total</b>	<b>0.25</b>	<b>5.48</b>	<b>3.30</b>	<b>0.01</b>	<b>0.19</b>	<b>0.05</b>	<b>1284.10</b>	<b>0.05</b>	<b>0.04</b>	<b>1298.57</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	3.27	0.00	0.00	3.32
Water Truck	0.00	0.02	0.09	0.00	0.00	0.00	20.07	0.00	0.00	20.29
Lowboy Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
Worker Commute	0.01	0.15	0.02	0.00	0.00	0.00	21.23	0.00	0.00	21.47
<b>Offsite Total</b>	<b>0.01</b>	<b>0.19</b>	<b>0.12</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>44.94</b>	<b>0.00</b>	<b>0.00</b>	<b>45.45</b>
<b>Total</b>	<b>0.01</b>	<b>0.19</b>	<b>0.12</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>44.94</b>	<b>0.00</b>	<b>0.00</b>	<b>45.45</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	3	Unpaved	17	70	0.564	0.056	28.74	2.87	1.01	0.10
1-Ton Truck, 4x4	3	Paved	10	70	0.003	0.001	0.10	0.02	0.00	0.00
Water Truck	6	Unpaved	17	70	0.977	0.098	99.70	9.97	3.49	0.35
Water Truck	6	Paved	10	70	0.003	0.001	0.20	0.05	0.01	0.00
Lowboy Truck/Trailer	3	Unpaved	1	70	0.977	0.098	2.93	0.29	0.10	0.01
Worker Commute	15	Paved	58	70	0.003	0.001	2.90	0.71	0.10	0.02
<b>Offsite Total</b>							<b>134.56</b>	<b>13.92</b>	<b>4.71</b>	<b>0.49</b>
<b>Total</b>							<b>134.56</b>	<b>13.92</b>	<b>4.71</b>	<b>0.49</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 46**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Right-of-Way Clearing**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr	42	2940	1.735	0.775	72.85	32.56	2.55	1.14
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>72.85</b>	<b>32.56</b>	<b>2.55</b>	<b>1.14</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 47**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Roads and Landing Work**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	21.08	73.13	161.45	0.32	5.84	5.37	31,372.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	85.49	37.55	
<b>Onsite Total</b>	<b>21.08</b>	<b>73.13</b>	<b>161.45</b>	<b>0.32</b>	<b>91.33</b>	<b>42.92</b>	<b>31372.7</b>
Offsite Motor Vehicle Exhaust	0.40	9.31	4.65	0.02	0.29	0.07	2,021.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	218.64	22.62	
<b>Offsite Total</b>	<b>0.40</b>	<b>9.31</b>	<b>4.65</b>	<b>0.02</b>	<b>218.93</b>	<b>22.69</b>	<b>2021.4</b>
<b>Total</b>	<b>21.48</b>	<b>82.44</b>	<b>166.11</b>	<b>0.35</b>	<b>310.26</b>	<b>65.61</b>	<b>33394.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.97	3.38	7.50	0.01	0.27	0.25	1,436.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	4.27	1.88	
<b>Onsite Total</b>	<b>0.97</b>	<b>3.38</b>	<b>7.50</b>	<b>0.01</b>	<b>4.55</b>	<b>2.13</b>	<b>1436.6</b>
Offsite Motor Vehicle Exhaust	0.02	0.47	0.23	0.00	0.01	0.00	100.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	10.85	1.12	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.23</b>	<b>0.00</b>	<b>10.87</b>	<b>1.13</b>	<b>100.8</b>
<b>Total</b>	<b>0.99</b>	<b>3.85</b>	<b>7.73</b>	<b>0.02</b>	<b>15.41</b>	<b>3.25</b>	<b>1537.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	350	4	100	7
Track Type Dozer	350	4	100	7
Road Grader	350	4	100	5
Drum Type Compactor	250	4	100	5
Excavator	300	4	60	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	350	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes
Track Type Dozer	350	0.218	0.790	1.742	0.003	0.067	0.061	258.997	0.020	0.007	Crawler Tractors
Road Grader	350	0.158	0.552	1.238	0.002	0.045	0.041	229.278	0.014	0.006	Graders
Drum Type Compactor	250	0.104	0.346	0.995	0.002	0.033	0.031	152.952	0.009	0.004	Rollers
Excavator	300	0.149	0.485	1.022	0.002	0.037	0.034	233.525	0.013	0.006	Excavators

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 47**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Roads and Landing Work**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	5.55	19.48	39.41	0.11	1.39	1.28	9647.23	0.50	0.25	9,735.4
Track Type Dozer	6.11	22.11	48.77	0.07	1.87	1.72	7251.90	0.55	0.19	7,322.0
Road Grader	3.15	11.04	24.76	0.05	0.89	0.82	4585.56	0.28	0.12	4,628.5
Drum Type Compactor	2.08	6.92	19.89	0.03	0.67	0.61	3059.05	0.19	0.08	3,087.6
Excavator	4.18	13.57	28.63	0.06	1.02	0.94	6538.71	0.38	0.17	6,599.3
<b>Total</b>	<b>21.08</b>	<b>73.13</b>	<b>161.45</b>	<b>0.32</b>	<b>5.84</b>	<b>5.37</b>	<b>31082.46</b>	<b>1.90</b>	<b>0.81</b>	<b>31372.69</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.28	0.97	1.97	0.01	0.07	0.06	482.36	0.03	0.01	486.8
Track Type Dozer	0.31	1.11	2.44	0.00	0.09	0.09	362.60	0.03	0.01	366.1
Road Grader	0.16	0.55	1.24	0.00	0.04	0.04	229.28	0.01	0.01	231.4
Drum Type Compactor	0.10	0.35	0.99	0.00	0.03	0.03	152.95	0.01	0.00	154.4
Excavator	0.13	0.41	0.86	0.00	0.03	0.03	196.16	0.01	0.01	198.0
<b>Total</b>	<b>0.97</b>	<b>3.38</b>	<b>7.50</b>	<b>0.01</b>	<b>0.27</b>	<b>0.25</b>	<b>1423.35</b>	<b>0.09</b>	<b>0.04</b>	<b>1436.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	8	100	N/A	27
Water Truck	8	100	N/A	27
Lowboy Truck/Trailer	4	60	N/A	1
Worker Commute	24	100	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114



**Table 47**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Roads and Landing Work**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88
Water Truck	0.09	0.62	3.58	0.01	0.12	0.07	764.69	0.00	0.03	772.87
Lowboy Truck/Trailer	0.00	0.01	0.07	0.00	0.00	0.00	14.16	0.00	0.00	14.31
Worker Commute	0.24	6.99	0.76	0.01	0.14	0.01	970.30	0.06	0.03	981.38
<b>Offsite Total</b>	<b>0.40</b>	<b>9.31</b>	<b>4.65</b>	<b>0.02</b>	<b>0.29</b>	<b>0.07</b>	<b>1998.53</b>	<b>0.08</b>	<b>0.07</b>	<b>2021.43</b>
<b>Total</b>	<b>0.40</b>	<b>9.31</b>	<b>4.65</b>	<b>0.02</b>	<b>0.29</b>	<b>0.07</b>	<b>1998.53</b>	<b>0.08</b>	<b>0.07</b>	<b>2021.43</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.08	0.01	0.00	0.00	0.00	12.47	0.00	0.00	12.64
Water Truck	0.00	0.03	0.18	0.00	0.01	0.00	38.23	0.00	0.00	38.64
Lowboy Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.43
Worker Commute	0.01	0.35	0.04	0.00	0.01	0.00	48.52	0.00	0.00	49.07
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.23</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>99.64</b>	<b>0.00</b>	<b>0.00</b>	<b>100.79</b>
<b>Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.23</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>99.64</b>	<b>0.00</b>	<b>0.00</b>	<b>100.79</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	8	Unpaved	17	100	0.564	0.056	76.64	7.66	3.83	0.38
1-Ton Truck, 4x4	8	Paved	10	100	0.003	0.001	0.27	0.07	0.01	0.00
Water Truck	8	Unpaved	17	100	0.977	0.098	132.93	13.29	6.65	0.66
Water Truck	8	Paved	10	100	0.003	0.001	0.27	0.07	0.01	0.00

**Table 47**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Roads and Landing Work**

Lowboy Truck/Trailer	4	Unpaved	1	60	0.977	0.098	3.91	0.39	0.12	0.01
Worker Commute	24	Paved	58	100	0.003	0.001	4.63	1.14	0.23	0.06
<b>Offsite Total</b>							<b>218.64</b>	<b>22.62</b>	<b>10.85</b>	<b>1.12</b>
<b>Total</b>							<b>218.64</b>	<b>22.62</b>	<b>10.85</b>	<b>1.12</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	2223	222288	1.00E-03	1.52E-04	2.23	0.34	0.11	0.02
Bulldozing, Scraping and Grading	hr	48	4800	1.735	0.775	83.26	37.21	4.16	1.86
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>85.49</b>	<b>37.55</b>	<b>4.27</b>	<b>1.88</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Based on excavating or backfilling and grading 18 ft. wide x 42.1 miles long x 1.5 ft. deep = 222,228 CY over 100 days

**Table 48**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Retaining Wall Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	6.07	27.28	46.47	0.11	1.75	1.61	9,979.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>6.07</b>	<b>27.28</b>	<b>46.47</b>	<b>0.11</b>	<b>1.75</b>	<b>1.61</b>	<b>9979.3</b>
Offsite Motor Vehicle Exhaust	0.44	5.94	12.17	0.03	0.46	0.22	3,087.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	255.73	26.15	
<b>Offsite Total</b>	<b>0.44</b>	<b>5.94</b>	<b>12.17</b>	<b>0.03</b>	<b>256.19</b>	<b>26.36</b>	<b>3087.2</b>
<b>Total</b>	<b>6.51</b>	<b>33.21</b>	<b>58.64</b>	<b>0.14</b>	<b>257.94</b>	<b>27.97</b>	<b>13066.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.61	2.73	4.65	0.01	0.18	0.16	997.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.61</b>	<b>2.73</b>	<b>4.65</b>	<b>0.01</b>	<b>0.18</b>	<b>0.16</b>	<b>997.9</b>
Offsite Motor Vehicle Exhaust	0.04	0.54	0.92	0.00	0.04	0.02	244.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	20.54	2.10	
<b>Offsite Total</b>	<b>0.04</b>	<b>0.54</b>	<b>0.92</b>	<b>0.00</b>	<b>20.58</b>	<b>2.12</b>	<b>244.3</b>
<b>Total</b>	<b>0.64</b>	<b>3.27</b>	<b>5.57</b>	<b>0.01</b>	<b>20.75</b>	<b>2.28</b>	<b>1242.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom Truck	350	2	200	8
Tracked Drill Rig	250	2	200	8
Rubber Tire Backhoe	125	2	200	8
Wheel Loader	250	2	200	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Tracked Drill Rig	250	0.063	0.342	0.388	0.002	0.011	0.010	187.933	0.006	0.005	Bore/Drill Rigs
Rubber Tire Backhoe	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Wheel Loader	250	0.106	0.335	0.888	0.002	0.030	0.028	148.843	0.010	0.004	Rubber Tired Loaders

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 48**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Retaining Wall Installation**

Boom Truck	2.12	7.08	17.14	0.03	0.62	0.57	2879.03	0.19	0.07	2,906.2
Tracked Drill Rig	1.00	5.48	6.21	0.03	0.18	0.17	3006.93	0.09	0.08	3,033.0
Rubber Tire Backhoe	1.26	9.35	8.91	0.02	0.47	0.43	1620.73	0.11	0.04	1,636.2
Wheel Loader	1.69	5.37	14.21	0.03	0.48	0.44	2381.49	0.15	0.06	2,403.9
<b>Total</b>	<b>6.07</b>	<b>27.28</b>	<b>46.47</b>	<b>0.11</b>	<b>1.75</b>	<b>1.61</b>	<b>9888.18</b>	<b>0.55</b>	<b>0.26</b>	<b>9979.34</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom Truck	0.21	0.71	1.71	0.00	0.06	0.06	287.90	0.02	0.01	290.6
Tracked Drill Rig	0.10	0.55	0.62	0.00	0.02	0.02	300.69	0.01	0.01	303.3
Rubber Tire Backhoe	0.13	0.94	0.89	0.00	0.05	0.04	162.07	0.01	0.00	163.6
Wheel Loader	0.17	0.54	1.42	0.00	0.05	0.04	238.15	0.02	0.01	240.4
<b>Total</b>	<b>0.61</b>	<b>2.73</b>	<b>4.65</b>	<b>0.01</b>	<b>0.18</b>	<b>0.16</b>	<b>988.82</b>	<b>0.05</b>	<b>0.03</b>	<b>997.93</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	200	N/A	27
Boom Truck	2	200	N/A	27
Dump Truck	4	200	N/A	60
Water Truck	2	200	N/A	27
Concrete Redi-Mix Truck	6	100	N/A	60
Worker Commute	12	200	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	HHDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Redi-Mix Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Table 48**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Retaining Wall Installation**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.02	0.42	0.06	0.00	0.01	0.00	62.34	0.00	0.00	63.22
Boom Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Dump Truck	0.10	0.68	3.97	0.01	0.13	0.07	849.66	0.00	0.03	858.74
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Concrete Redi-Mix Truck	0.15	1.03	5.96	0.01	0.20	0.11	1274.49	0.01	0.04	1288.11
Worker Commute	0.12	3.50	0.38	0.01	0.07	0.00	485.15	0.03	0.02	490.69
<b>Offsite Total</b>	<b>0.44</b>	<b>5.94</b>	<b>12.17</b>	<b>0.03</b>	<b>0.46</b>	<b>0.22</b>	<b>3053.99</b>	<b>0.05</b>	<b>0.10</b>	<b>3087.19</b>
<b>Total</b>	<b>0.44</b>	<b>5.94</b>	<b>12.17</b>	<b>0.03</b>	<b>0.46</b>	<b>0.22</b>	<b>3053.99</b>	<b>0.05</b>	<b>0.10</b>	<b>3087.19</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	6.23	0.00	0.00	6.32
Boom Truck	0.00	0.02	0.09	0.00	0.00	0.00	19.12	0.00	0.00	19.32
Dump Truck	0.01	0.07	0.40	0.00	0.01	0.01	84.97	0.00	0.00	85.87
Water Truck	0.00	0.02	0.09	0.00	0.00	0.00	19.12	0.00	0.00	19.32
Concrete Redi-Mix Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Worker Commute	0.01	0.35	0.04	0.00	0.01	0.00	48.52	0.00	0.00	49.07
<b>Offsite Total</b>	<b>0.04</b>	<b>0.54</b>	<b>0.92</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>241.67</b>	<b>0.00</b>	<b>0.01</b>	<b>244.31</b>
<b>Total</b>	<b>0.04</b>	<b>0.54</b>	<b>0.92</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>241.67</b>	<b>0.00</b>	<b>0.01</b>	<b>244.31</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 48**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Retaining Wall Installation**

1-Ton Truck, 4x4	2	Unpaved	17	200	0.564	0.056	19.16	1.92	1.92	0.19
1-Ton Truck, 4x4	2	Paved	10	200	0.003	0.001	0.07	0.02	0.01	0.00
Boom Truck	2	Unpaved	17	200	0.977	0.098	33.23	3.32	3.32	0.33
Boom Truck	2	Paved	10	200	0.003	0.001	0.07	0.02	0.01	0.00
Dump Truck	4	Unpaved	17	200	0.977	0.098	66.46	6.65	6.65	0.66
Dump Truck	4	Paved	43	200	0.003	0.001	0.57	0.14	0.06	0.01
Water Truck	2	Unpaved	17	200	0.977	0.098	33.23	3.32	3.32	0.33
Water Truck	2	Paved	10	200	0.003	0.001	0.07	0.02		
Concrete Redi-Mix Truck	6	Unpaved	17	100	0.977	0.098	99.70	9.97	4.98	0.50
Concrete Redi-Mix Truck	6	Paved	43	100	0.003	0.001	0.86	0.21	0.04	0.01
Worker Commute	12	Paved	58	200	0.003	0.001	2.32	0.57	0.23	0.06
<b>Offsite Total</b>							<b>255.73</b>	<b>26.15</b>	<b>20.54</b>	<b>2.10</b>
<b>Total</b>							<b>255.73</b>	<b>26.15</b>	<b>20.54</b>	<b>2.10</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 49**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Wet Crossing Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	13.89	60.40	107.04	0.22	4.11	3.78	19,801.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>13.89</b>	<b>60.40</b>	<b>107.04</b>	<b>0.22</b>	<b>4.11</b>	<b>3.78</b>	<b>19801.1</b>
Offsite Motor Vehicle Exhaust	1.24	17.35	33.82	0.09	1.30	0.60	8,681.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	667.30	68.42	
<b>Offsite Total</b>	<b>1.24</b>	<b>17.35</b>	<b>33.82</b>	<b>0.09</b>	<b>668.60</b>	<b>69.02</b>	<b>8681.9</b>
<b>Total</b>	<b>15.14</b>	<b>77.75</b>	<b>140.87</b>	<b>0.31</b>	<b>672.71</b>	<b>72.81</b>	<b>28483.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.59	2.57	4.55	0.01	0.17	0.16	841.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.59</b>	<b>2.57</b>	<b>4.55</b>	<b>0.01</b>	<b>0.17</b>	<b>0.16</b>	<b>841.5</b>
Offsite Motor Vehicle Exhaust	0.04	0.67	1.07	0.00	0.04	0.02	289.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	22.17	2.28	
<b>Offsite Total</b>	<b>0.04</b>	<b>0.67</b>	<b>1.07</b>	<b>0.00</b>	<b>22.21</b>	<b>2.30</b>	<b>289.8</b>
<b>Total</b>	<b>0.63</b>	<b>3.24</b>	<b>5.62</b>	<b>0.01</b>	<b>22.39</b>	<b>2.46</b>	<b>1131.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Tracked Excavator	250	6	85	8
Rubber Tire Backhoe	125	6	85	8
Wheel Loader	250	6	85	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Tracked Excavator	250	0.105	0.339	0.785	0.002	0.026	0.024	158.540	0.009	0.004	Excavators
Rubber Tire Backhoe	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Wheel Loader	250	0.106	0.335	0.888	0.002	0.030	0.028	148.843	0.010	0.004	Rubber Tired Loaders

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Tracked Excavator	5.05	16.25	37.68	0.09	1.26	1.16	7609.93	0.46	0.20	7,680.8
Rubber Tire Backhoe	3.78	28.05	26.72	0.05	1.40	1.29	4862.20	0.34	0.13	4,908.7

**Table 49**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Wet Crossing Installation**

Wheel Loader	5.07	16.10	42.64	0.08	1.45	1.33	7144.46	0.46	0.19	7,211.6
<b>Total</b>	<b>13.89</b>	<b>60.40</b>	<b>107.04</b>	<b>0.22</b>	<b>4.11</b>	<b>3.78</b>	<b>19616.60</b>	<b>1.25</b>	<b>0.51</b>	<b>19801.09</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Tracked Excavator	0.21	0.69	1.60	0.00	0.05	0.05	323.42	0.02	0.01	326.4
Rubber Tire Backhoe	0.16	1.19	1.14	0.00	0.06	0.05	206.64	0.01	0.01	208.6
Wheel Loader	0.22	0.68	1.81	0.00	0.06	0.06	303.64	0.02	0.01	306.5
<b>Total</b>	<b>0.59</b>	<b>2.57</b>	<b>4.55</b>	<b>0.01</b>	<b>0.17</b>	<b>0.16</b>	<b>833.71</b>	<b>0.05</b>	<b>0.02</b>	<b>841.55</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	6	85	N/A	27
Dump Truck	12	85	N/A	60
Water Truck	6	85	N/A	27
Concrete Redi-Mix Truck	18	44	N/A	60
Worker Commute	36	85	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Redi-Mix Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



**Table 49**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Wet Crossing Installation**

<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.05	1.27	0.19	0.00	0.02	0.00	187.03	0.01	0.01	189.66
Dump Truck	0.30	2.05	11.92	0.03	0.39	0.22	2548.98	0.01	0.09	2576.22
Water Truck	0.07	0.46	2.68	0.01	0.09	0.05	573.52	0.00	0.02	579.65
Concrete Redi-Mix Truck	0.46	3.08	17.89	0.04	0.59	0.33	3823.47	0.02	0.13	3864.33
Worker Commute	0.37	10.49	1.14	0.02	0.22	0.01	1455.46	0.09	0.05	1472.07
<b>Offsite Total</b>	<b>1.24</b>	<b>17.35</b>	<b>33.82</b>	<b>0.09</b>	<b>1.30</b>	<b>0.60</b>	<b>8588.46</b>	<b>0.14</b>	<b>0.29</b>	<b>8681.92</b>
<b>Total</b>	<b>1.24</b>	<b>17.35</b>	<b>33.82</b>	<b>0.09</b>	<b>1.30</b>	<b>0.60</b>	<b>8588.46</b>	<b>0.14</b>	<b>0.29</b>	<b>8681.92</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.05	0.01	0.00	0.00	0.00	7.95	0.00	0.00	8.06
Dump Truck	0.01	0.09	0.51	0.00	0.02	0.01	108.33	0.00	0.00	109.49
Water Truck	0.00	0.02	0.11	0.00	0.00	0.00	24.37	0.00	0.00	24.64
Concrete Redi-Mix Truck	0.01	0.07	0.39	0.00	0.01	0.01	84.12	0.00	0.00	85.02
Worker Commute	0.02	0.45	0.05	0.00	0.01	0.00	61.86	0.00	0.00	62.56
<b>Offsite Total</b>	<b>0.04</b>	<b>0.67</b>	<b>1.07</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>286.63</b>	<b>0.01</b>	<b>0.01</b>	<b>289.76</b>
<b>Total</b>	<b>0.04</b>	<b>0.67</b>	<b>1.07</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>286.63</b>	<b>0.01</b>	<b>0.01</b>	<b>289.76</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	6	Unpaved	17	85	0.564	0.056	57.48	5.75	2.44	0.24
1-Ton Truck, 4x4	6	Paved	10	85	0.003	0.001	0.20	0.05	0.01	0.00
Dump Truck	12	Unpaved	17	85	0.977	0.098	199.39	19.94	8.47	0.85
Dump Truck	12	Paved	43	85	0.003	0.001	1.72	0.42	0.07	0.02
Water Truck	6	Unpaved	17	85	0.977	0.098	99.70	9.97	4.24	0.42
Water Truck	6	Paved	10	85	0.003	0.001	0.20	0.05		
Concrete Redi-Mix Truck	18	Unpaved	17	44	0.977	0.098	299.09	29.91	6.58	0.66
Concrete Redi-Mix Truck	18	Paved	43	44	0.003	0.001	2.58	0.63	0.06	0.01

**Table 49**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Wet Crossing Installation**

Worker Commute	36	Paved	58	85	0.003	0.001	6.95	1.71	0.30	0.07
<b>Offsite Total</b>							<b>667.30</b>	<b>68.42</b>	<b>22.17</b>	<b>2.28</b>
<b>Total</b>							<b>667.30</b>	<b>68.42</b>	<b>22.17</b>	<b>2.28</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 50**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Guard Structure Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	11.20	48.80	87.62	0.21	3.43	3.16	21,470.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>11.20</b>	<b>48.80</b>	<b>87.62</b>	<b>0.21</b>	<b>3.43</b>	<b>3.16</b>	<b>21470.2</b>
Offsite Motor Vehicle Exhaust	0.51	10.03	8.73	0.03	0.43	0.15	2,958.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	390.82	39.90	
<b>Offsite Total</b>	<b>0.51</b>	<b>10.03</b>	<b>8.73</b>	<b>0.03</b>	<b>391.25</b>	<b>40.05</b>	<b>2958.4</b>
<b>Total</b>	<b>11.71</b>	<b>58.83</b>	<b>96.35</b>	<b>0.24</b>	<b>394.68</b>	<b>43.20</b>	<b>24428.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.25	1.10	1.97	0.00	0.08	0.07	483.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.25</b>	<b>1.10</b>	<b>1.97</b>	<b>0.00</b>	<b>0.08</b>	<b>0.07</b>	<b>483.1</b>
Offsite Motor Vehicle Exhaust	0.01	0.23	0.20	0.00	0.01	0.00	66.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	8.79	0.90	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.23</b>	<b>0.20</b>	<b>0.00</b>	<b>8.80</b>	<b>0.90</b>	<b>66.6</b>
<b>Total</b>	<b>0.26</b>	<b>1.32</b>	<b>2.17</b>	<b>0.01</b>	<b>8.88</b>	<b>0.97</b>	<b>549.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	4	45	7
Manlift/Bucket Truck	350	4	45	5
Boom/Crane Truck	500	4	45	8
Auger Truck	500	4	45	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	500	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Auger Truck	500	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

<sup>a</sup> From Table 111

**Table 50**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Guard Structure Installation**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.76	8.82	11.22	0.02	0.94	0.87	1313.43	0.16	0.03	1,327.4
Manlift/Bucket Truck	1.90	8.19	22.14	0.04	0.66	0.61	4253.30	0.17	0.11	4,291.1
Boom/Crane Truck	4.24	14.17	34.27	0.06	1.24	1.14	5758.07	0.38	0.15	5,812.5
Auger Truck	3.30	17.62	19.99	0.10	0.60	0.55	9952.93	0.30	0.26	10,039.1
<b>Total</b>	<b>11.20</b>	<b>48.80</b>	<b>87.62</b>	<b>0.21</b>	<b>3.43</b>	<b>3.16</b>	<b>21277.72</b>	<b>1.01</b>	<b>0.55</b>	<b>21470.16</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.04	0.20	0.25	0.00	0.02	0.02	29.55	0.00	0.00	29.9
Manlift/Bucket Truck	0.04	0.18	0.50	0.00	0.01	0.01	95.70	0.00	0.00	96.5
Boom/Crane Truck	0.10	0.32	0.77	0.00	0.03	0.03	129.56	0.01	0.00	130.8
Auger Truck	0.07	0.40	0.45	0.00	0.01	0.01	223.94	0.01	0.01	225.9
<b>Total</b>	<b>0.25</b>	<b>1.10</b>	<b>1.97</b>	<b>0.00</b>	<b>0.08</b>	<b>0.07</b>	<b>478.75</b>	<b>0.02</b>	<b>0.01</b>	<b>483.08</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	8	45	N/A	27
1-Ton Truck, 4x4	4	45	N/A	27
Manlift/Bucket Truck	4	45	N/A	27
Boom/Crane Truck	4	45	N/A	27
Water Truck	1	45	N/A	27
Auger Truck	4	45	N/A	27
Extendable Flat Bed Pole Truck	4	45	N/A	27
Worker Commute	24	45	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										

**Table 50**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Guard Structure Installation**

None	HHDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/ Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/ Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Extendable Flat Bed Pole Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88
1-Ton Truck, 4x4	0.01	0.04	0.12	0.00	0.02	0.01	80.88	0.00	0.00	81.84
Manlift/ Bucket Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Boom/ Crane Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Auger Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Extendable Flat Bed Pole Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Worker Commute	0.24	6.99	0.76	0.01	0.14	0.01	970.30	0.06	0.03	981.38
<b>Offsite Total</b>	<b>0.51</b>	<b>10.03</b>	<b>8.73</b>	<b>0.03</b>	<b>0.43</b>	<b>0.15</b>	<b>2925.53</b>	<b>0.08</b>	<b>0.10</b>	<b>2958.43</b>
<b>Total</b>	<b>0.51</b>	<b>10.03</b>	<b>8.73</b>	<b>0.03</b>	<b>0.43</b>	<b>0.15</b>	<b>2925.53</b>	<b>0.08</b>	<b>0.10</b>	<b>2958.43</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	5.61	0.00	0.00	5.69
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.82	0.00	0.00	1.84
Manlift/ Bucket Truck	0.00	0.01	0.04	0.00	0.00	0.00	8.60	0.00	0.00	8.69

**Table 50  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Guard Structure Installation**

Boom/Crane Truck	0.00	0.01	0.04	0.00	0.00	0.00	8.60	0.00	0.00	8.69
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.15	0.00	0.00	2.17
Auger Truck	0.00	0.01	0.04	0.00	0.00	0.00	8.60	0.00	0.00	8.69
Extendable Flat Bed Pole Truck	0.00	0.01	0.04	0.00	0.00	0.00	8.60	0.00	0.00	8.69
Worker Commute	0.01	0.16	0.02	0.00	0.00	0.00	21.83	0.00	0.00	22.08
<b>Offsite Total</b>	<b>0.01</b>	<b>0.23</b>	<b>0.20</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>65.82</b>	<b>0.00</b>	<b>0.00</b>	<b>66.56</b>
<b>Total</b>	<b>0.01</b>	<b>0.23</b>	<b>0.20</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>65.82</b>	<b>0.00</b>	<b>0.00</b>	<b>66.56</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	8	Unpaved	17	45	0.474	0.047	64.43	6.44	1.45	0.14
3/4-Ton Truck, 4x4	8	Paved	10	45	0.003	0.001	0.27	0.07	0.01	0.00
1-Ton Truck, 4x4	4	Unpaved	17	45	0.564	0.056	38.32	3.83	0.86	0.09
1-Ton Truck, 4x4	4	Paved	10	45	0.003	0.001	0.13	0.03	0.00	0.00
Manlift/Bucket Truck	4	Unpaved	17	45	0.977	0.098	66.46	6.65	1.50	0.15
Manlift/Bucket Truck	4	Paved	10	45	0.003	0.001	0.13	0.03	0.00	0.00
Boom/Crane Truck	4	Unpaved	17	45	0.977	0.098	66.46	6.65	1.50	0.15
Boom/Crane Truck	4	Paved	10	45	0.003	0.001	0.13	0.03	0.00	0.00
Water Truck	1	Unpaved	17	45	0.977	0.098	16.62	1.66	0.37	0.04
Water Truck	1	Paved	10	45	0.003	0.001	0.03	0.01	0.00	0.00
Auger Truck	4	Unpaved	17	45	0.977	0.098	66.46	6.65	1.50	0.15
Auger Truck	4	Paved	10	45	0.003	0.001	0.13	0.03	0.00	0.00
Extendable Flat Bed Pole Truck	4	Unpaved	17	45	0.977	0.098	66.46	6.65	1.50	0.15
Extendable Flat Bed Pole Truck	4	Paved	10	45	0.003	0.001	0.13	0.03	0.00	0.00
Worker Commute	24	Paved	58	45	0.003	0.001	4.63	1.14	0.10	0.03
<b>Offsite Total</b>							<b>390.82</b>	<b>39.90</b>	<b>8.79</b>	<b>0.90</b>
<b>Total</b>							<b>390.82</b>	<b>39.90</b>	<b>8.79</b>	<b>0.90</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 50**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Guard Structure Installation**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

Table 51

Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Remove Existing Conductor & GW

Daily Emissions Summary

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	16.11	65.40	162.50	0.33	5.11	4.70	33,567.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>16.11</b>	<b>65.40</b>	<b>162.50</b>	<b>0.33</b>	<b>5.11</b>	<b>4.70</b>	<b>33567.5</b>
Offsite Motor Vehicle Exhaust	0.78	14.59	14.67	0.05	0.72	0.26	4,764.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	606.30	62.01	
<b>Offsite Total</b>	<b>0.78</b>	<b>14.59</b>	<b>14.67</b>	<b>0.05</b>	<b>607.02</b>	<b>62.27</b>	<b>4764.6</b>
<b>Total</b>	<b>16.89</b>	<b>79.98</b>	<b>177.16</b>	<b>0.38</b>	<b>612.13</b>	<b>66.97</b>	<b>38332.0</b>

Total Emissions Summary

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.78	3.18	7.99	0.02	0.25	0.23	1,627.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.78</b>	<b>3.18</b>	<b>7.99</b>	<b>0.02</b>	<b>0.25</b>	<b>0.23</b>	<b>1627.7</b>
Offsite Motor Vehicle Exhaust	0.04	0.76	0.72	0.00	0.04	0.01	238.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	29.83	3.06	
<b>Offsite Total</b>	<b>0.04</b>	<b>0.76</b>	<b>0.72</b>	<b>0.00</b>	<b>29.87</b>	<b>3.07</b>	<b>238.5</b>
<b>Total</b>	<b>0.82</b>	<b>3.93</b>	<b>8.70</b>	<b>0.02</b>	<b>30.12</b>	<b>3.30</b>	<b>1866.3</b>

Construction Equipment Summary

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Manlift/Bucket Truck	350	9	105	10
Sleeving Truck	300	3	105	5
Boom/Crane Truck	350	3	105	5
Bull Wheel Puller	500	3	70	5
Hydraulic Rewind Puller	300	3	70	5

Construction Equipment Exhaust Emission Factors

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Sleeving Truck	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Bull Wheel Puller	500	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Hydraulic Rewind Puller	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment

a From Table 111

Construction Equipment Daily Exhaust Emissions



**Table 51**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Remove Existing Conductor & GW**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Manlift/Bucket Truck	8.54	36.87	99.62	0.19	2.96	2.72	19139.85	0.77	0.50	19,309.9
Sleeving Truck	1.86	7.30	15.60	0.04	0.52	0.48	3810.15	0.17	0.10	3,844.3
Boom/Crane Truck	1.99	6.64	16.07	0.03	0.58	0.53	2699.09	0.18	0.07	2,724.6
Bull Wheel Puller	1.86	7.30	15.60	0.04	0.52	0.48	3810.15	0.17	0.10	3,844.3
Hydraulic Rewind Puller	1.86	7.30	15.60	0.04	0.52	0.48	3810.15	0.17	0.10	3,844.3
<b>Total</b>	<b>16.11</b>	<b>65.40</b>	<b>162.50</b>	<b>0.33</b>	<b>5.11</b>	<b>4.70</b>	<b>33269.39</b>	<b>1.45</b>	<b>0.86</b>	<b>33567.45</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Manlift/Bucket Truck	0.45	1.94	5.23	0.01	0.16	0.14	1004.84	0.04	0.03	1,013.8
Sleeving Truck	0.10	0.38	0.82	0.00	0.03	0.03	200.03	0.01	0.01	201.8
Boom/Crane Truck	0.10	0.35	0.84	0.00	0.03	0.03	141.70	0.01	0.00	143.0
Bull Wheel Puller	0.07	0.26	0.55	0.00	0.02	0.02	133.36	0.01	0.00	134.6
Hydraulic Rewind Puller	0.07	0.26	0.55	0.00	0.02	0.02	133.36	0.01	0.00	134.6
<b>Total</b>	<b>0.78</b>	<b>3.18</b>	<b>7.99</b>	<b>0.02</b>	<b>0.25</b>	<b>0.23</b>	<b>1613.29</b>	<b>0.07</b>	<b>0.04</b>	<b>1627.74</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	12	105	N/A	27
Manlift/Bucket Truck	9	105	N/A	27
Sleeving Truck	3	105	N/A	27
Boom/Crane Truck	3	105	N/A	27
Truck, Semi Tractor	3	95	N/A	27
Water Truck	2	45	N/A	27
Lowboy Truck/Trailer	9	95	N/A	27
Worker Commute	42	105	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 51**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Remove Existing Conductor & GW**

Sleeving Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Truck, Semi Tractor	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.02	0.12	0.36	0.00	0.05	0.02	242.63	0.00	0.01	245.51
Manlift/Bucket Truck	0.10	0.69	4.02	0.01	0.13	0.07	860.28	0.00	0.03	869.47
Sleeving Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Boom/Crane Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Truck, Semi Tractor	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Lowboy Truck/Trailer	0.10	0.69	4.02	0.01	0.13	0.07	860.28	0.00	0.03	869.47
Worker Commute	0.43	12.24	1.33	0.02	0.25	0.01	1698.03	0.10	0.06	1717.41
<b>Offsite Total</b>	<b>0.78</b>	<b>14.59</b>	<b>14.67</b>	<b>0.05</b>	<b>0.72</b>	<b>0.26</b>	<b>4712.68</b>	<b>0.12</b>	<b>0.16</b>	<b>4764.56</b>
<b>Total</b>	<b>0.78</b>	<b>14.59</b>	<b>14.67</b>	<b>0.05</b>	<b>0.72</b>	<b>0.26</b>	<b>4712.68</b>	<b>0.12</b>	<b>0.16</b>	<b>4764.56</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	12.74	0.00	0.00	12.89
Manlift/Bucket Truck	0.01	0.04	0.21	0.00	0.01	0.00	45.16	0.00	0.00	45.65
Sleeving Truck	0.00	0.01	0.07	0.00	0.00	0.00	15.05	0.00	0.00	15.22
Boom/Crane Truck	0.00	0.01	0.07	0.00	0.00	0.00	15.05	0.00	0.00	15.22
Truck, Semi Tractor	0.00	0.01	0.06	0.00	0.00	0.00	13.62	0.00	0.00	13.77
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.30	0.00	0.00	4.35
Lowboy Truck/Trailer	0.00	0.03	0.19	0.00	0.01	0.00	40.86	0.00	0.00	41.30
Worker Commute	0.02	0.64	0.07	0.00	0.01	0.00	89.15	0.01	0.00	90.16
<b>Offsite Total</b>	<b>0.04</b>	<b>0.76</b>	<b>0.72</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>235.95</b>	<b>0.01</b>	<b>0.01</b>	<b>238.55</b>
<b>Total</b>	<b>0.04</b>	<b>0.76</b>	<b>0.72</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>235.95</b>	<b>0.01</b>	<b>0.01</b>	<b>238.55</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 51  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Remove Existing Conductor & GW**

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	12	Unpaved	17	105	0.564	0.056	114.96	11.50	6.04	0.60
1-Ton Truck, 4x4	12	Paved	10	105	0.003	0.001	0.40	0.10	0.02	0.01
Manlift/Bucket Truck	9	Unpaved	17	105	0.977	0.098	149.54	14.95	7.85	0.79
Manlift/Bucket Truck	9	Paved	10	105	0.003	0.001	0.30	0.07	0.02	0.00
Sleeving Truck	3	Unpaved	17	105	0.977	0.098	49.85	4.98	2.62	0.26
Sleeving Truck	3	Paved	10	105	0.003	0.001	0.10	0.02	0.01	0.00
Boom/Crane Truck	3	Unpaved	17	105	0.977	0.098	49.85	4.98	2.62	0.26
Boom/Crane Truck	3	Paved	10	105	0.003	0.001	0.10	0.02	0.01	0.00
Truck, Semi Tractor	3	Unpaved	17	95	0.977	0.098	49.85	4.98	2.37	0.24
Truck, Semi Tractor	3	Paved	10	95	0.003	0.001	0.10	0.02	0.00	0.00
Water Truck	2	Unpaved	17	45	0.977	0.098	33.23	3.32	0.75	0.07
Water Truck	2	Paved	10	45	0.003	0.001	0.07	0.02	0.00	0.00
Lowboy Truck/Trailer	9	Unpaved	17	95	0.977	0.098	149.54	14.95	7.10	0.71
Lowboy Truck/Trailer	9	Paved	10	95	0.003	0.001	0.30	0.07	0.01	0.00
Worker Commute	42	Paved	58	105	0.003	0.001	8.11	1.99	0.43	0.10
<b>Offsite Total</b>							<b>606.30</b>	<b>62.01</b>	<b>29.83</b>	<b>3.06</b>
<b>Total</b>							<b>606.30</b>	<b>62.01</b>	<b>29.83</b>	<b>3.06</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 52**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Shoo-fly Pole Haul**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.12	7.08	17.14	0.03	0.62	0.57	2,906.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.12</b>	<b>7.08</b>	<b>17.14</b>	<b>0.03</b>	<b>0.62</b>	<b>0.57</b>	<b>2906.2</b>
Offsite Motor Vehicle Exhaust	0.15	3.14	2.55	0.01	0.13	0.04	873.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	100.96	10.36	
<b>Offsite Total</b>	<b>0.15</b>	<b>3.14</b>	<b>2.55</b>	<b>0.01</b>	<b>101.09</b>	<b>10.40</b>	<b>873.4</b>
<b>Total</b>	<b>2.27</b>	<b>10.22</b>	<b>19.69</b>	<b>0.04</b>	<b>101.71</b>	<b>10.97</b>	<b>3779.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	7.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.25	0.03	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.25</b>	<b>0.03</b>	<b>2.2</b>
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.05</b>	<b>0.00</b>	<b>0.25</b>	<b>0.03</b>	<b>9.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	2	5	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	2.12	7.08	17.14	0.03	0.62	0.57	2879.03	0.19	0.07	2,906.2

**Table 52**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Shoo-fly Pole Haul**

<b>Total</b>	<b>2.12</b>	<b>7.08</b>	<b>17.14</b>	<b>0.03</b>	<b>0.62</b>	<b>0.57</b>	<b>2879.03</b>	<b>0.19</b>	<b>0.07</b>	<b>2906.24</b>
--------------	-------------	-------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.01	0.02	0.04	0.00	0.00	0.00	7.20	0.00	0.00	7.3
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.20</b>	<b>0.00</b>	<b>0.00</b>	<b>7.27</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	2	5	N/A	27
Boom/Crane Truck	2	5	N/A	27
Water Truck	1	5	N/A	27
Flat Bed Pole Truck	2	5	N/A	27
Worker Commute	8	5	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Pole Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
---------	---------------------------	--------------------------	---------------------------	---------------------------	----------------------------	-----------------------------	---------------------------	---------------------------	---------------------------	----------------------------

**Table 52**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Shoo-fly Pole Haul**

<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.42	0.06	0.00	0.01	0.00	62.34	0.00	0.00	63.22
Boom/Crane Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Pole Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.15</b>	<b>3.14</b>	<b>2.55</b>	<b>0.01</b>	<b>0.13</b>	<b>0.04</b>	<b>863.71</b>	<b>0.03</b>	<b>0.03</b>	<b>873.39</b>
<b>Total</b>	<b>0.15</b>	<b>3.14</b>	<b>2.55</b>	<b>0.01</b>	<b>0.13</b>	<b>0.04</b>	<b>863.71</b>	<b>0.03</b>	<b>0.03</b>	<b>873.39</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.24
Flat Bed Pole Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.82
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.16</b>	<b>0.00</b>	<b>0.00</b>	<b>2.18</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.16</b>	<b>0.00</b>	<b>0.00</b>	<b>2.18</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	2	Unpaved	17	5	0.474	0.047	16.11	1.61	0.04	0.00

**Table 52**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Shoo-fly Pole Haul**

3/4-Ton Truck, 4x4	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Boom/Crane Truck	2	Unpaved	17	5	0.977	0.098	33.23	3.32	0.08	0.01
Boom/Crane Truck	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	1	Unpaved	17	5	0.977	0.098	16.62	1.66	0.04	0.00
Water Truck	1	Paved	10	5	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Pole Truck	2	Unpaved	17	5	0.977	0.098	33.23	3.32	0.08	0.01
Flat Bed Pole Truck	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	8	Paved	58	5	0.003	0.001	1.54	0.38	0.00	0.00
<b>Offsite Total</b>							<b>100.96</b>	<b>10.36</b>	<b>0.25</b>	<b>0.03</b>
<b>Total</b>							<b>100.96</b>	<b>10.36</b>	<b>0.25</b>	<b>0.03</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 53**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Install Shoo-fly Pole**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	6.33	31.56	54.48	0.12	1.97	1.81	11,912.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.02	0.00	
<b>Onsite Total</b>	<b>6.33</b>	<b>31.56</b>	<b>54.48</b>	<b>0.12</b>	<b>1.98</b>	<b>1.81</b>	<b>11912.3</b>
Offsite Motor Vehicle Exhaust	0.28	5.88	4.21	0.02	0.23	0.07	1,549.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	155.90	16.14	
<b>Offsite Total</b>	<b>0.28</b>	<b>5.88</b>	<b>4.21</b>	<b>0.02</b>	<b>156.13</b>	<b>16.22</b>	<b>1549.8</b>
<b>Total</b>	<b>6.61</b>	<b>37.44</b>	<b>58.69</b>	<b>0.14</b>	<b>158.11</b>	<b>18.03</b>	<b>13462.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.03	0.15	0.26	0.00	0.01	0.01	55.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.03</b>	<b>0.15</b>	<b>0.26</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>55.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.03	0.02	0.00	0.00	0.00	7.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.73	0.08	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>0.00</b>	<b>0.73</b>	<b>0.08</b>	<b>7.5</b>
<b>Total</b>	<b>0.03</b>	<b>0.18</b>	<b>0.28</b>	<b>0.00</b>	<b>0.74</b>	<b>0.08</b>	<b>62.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Manlift/Bucket Truck	350	2	10	10
Boom/Crane Truck	350	2	10	7
Auger Truck	210	2	7	8
Backhoe/Front Loader	125	2	10	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Auger Truck	210	0.063	0.342	0.388	0.002	0.011	0.010	187.933	0.006	0.005	Bore/Drill Rigs
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------



**Table 53**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Install Shoo-fly Pole**

Manlift/Bucket Truck	1.90	8.19	22.14	0.04	0.66	0.61	4253.30	0.17	0.11	4,291.1
Boom/Crane Truck	1.85	6.20	14.99	0.02	0.54	0.50	2519.15	0.17	0.07	2,543.0
Auger Truck	1.00	5.48	6.21	0.03	0.18	0.17	3006.93	0.09	0.08	3,033.0
Backhoe/Front Loader	1.57	11.69	11.13	0.02	0.58	0.54	2025.92	0.14	0.05	2,045.3
<b>Total</b>	<b>6.33</b>	<b>31.56</b>	<b>54.48</b>	<b>0.12</b>	<b>1.97</b>	<b>1.81</b>	<b>11805.30</b>	<b>0.57</b>	<b>0.31</b>	<b>11912.34</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Manlift/Bucket Truck	0.01	0.04	0.11	0.00	0.00	0.00	21.27	0.00	0.00	21.5
Boom/Crane Truck	0.01	0.03	0.07	0.00	0.00	0.00	12.60	0.00	0.00	12.7
Auger Truck	0.00	0.02	0.02	0.00	0.00	0.00	10.52	0.00	0.00	10.6
Backhoe/Front Loader	0.01	0.06	0.06	0.00	0.00	0.00	10.13	0.00	0.00	10.2
<b>Total</b>	<b>0.03</b>	<b>0.15</b>	<b>0.26</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>54.52</b>	<b>0.00</b>	<b>0.00</b>	<b>55.01</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	10	N/A	27
Manlift/Bucket Truck	2	10	N/A	27
Boom/Crane Truck	2	10	N/A	27
Auger Truck	2	7	N/A	27
Water Truck	2	10	N/A	27
Extendable Flat Bed Pole Truck	2	10	N/A	27
Worker Commute	18	10	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Extendable Flat Bed Pole Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 53**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install Shoo-fly Pole**

Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05
----------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92
Manlift/Bucket Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Boom/Crane Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Auger Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.28</b>	<b>5.88</b>	<b>4.21</b>	<b>0.02</b>	<b>0.23</b>	<b>0.07</b>	<b>1532.86</b>	<b>0.05</b>	<b>0.05</b>	<b>1549.82</b>
<b>Total</b>	<b>0.28</b>	<b>5.88</b>	<b>4.21</b>	<b>0.02</b>	<b>0.23</b>	<b>0.07</b>	<b>1532.86</b>	<b>0.05</b>	<b>0.05</b>	<b>1549.82</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.20
Manlift/Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.97
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.97
Auger Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00	0.68
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.97
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	3.64	0.00	0.00	3.68
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.38</b>	<b>0.00</b>	<b>0.00</b>	<b>7.46</b>
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.38</b>	<b>0.00</b>	<b>0.00</b>	<b>7.46</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00

**Table 53**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install Shoo-fly Pole**

<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	2	Unpaved	17	10	0.564	0.056	19.16	1.92	0.10	0.01
1-Ton Truck, 4x4	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Manlift/Bucket Truck	2	Unpaved	17	10	0.977	0.098	33.23	3.32	0.17	0.02
Manlift/Bucket Truck	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Boom/Crane Truck	2	Unpaved	17	10	0.977	0.098	33.23	3.32	0.17	0.02
Boom/Crane Truck	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Auger Truck	2	Unpaved	17	7	0.977	0.098	33.23	3.32	0.12	0.01
Auger Truck	2	Paved	10	7	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	2	Unpaved	17	10	0.977	0.098	33.23	3.32	0.17	0.02
Water Truck	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	18	Paved	58	10	0.003	0.001	3.48	0.85	0.02	0.00
<b>Offsite Total</b>							<b>155.90</b>	<b>16.14</b>	<b>0.73</b>	<b>0.08</b>
<b>Total</b>							<b>155.90</b>	<b>16.14</b>	<b>0.73</b>	<b>0.08</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling <sup>d</sup>	CY	18	173	1.00E-03	1.52E-04	0.02	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Based on 29 poles, 3.2 ft. diameter x 20 ft. deep over 10 days

**Table 54**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Shoo-fly Pole Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.44	5.43	10.97	0.02	0.51	0.47	1,737.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.44</b>	<b>5.43</b>	<b>10.97</b>	<b>0.02</b>	<b>0.51</b>	<b>0.47</b>	<b>1737.6</b>
Offsite Motor Vehicle Exhaust	0.25	6.00	2.48	0.01	0.18	0.04	1,226.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	105.47	11.09	
<b>Offsite Total</b>	<b>0.25</b>	<b>6.00</b>	<b>2.48</b>	<b>0.01</b>	<b>105.65</b>	<b>11.13</b>	<b>1226.6</b>
<b>Total</b>	<b>1.68</b>	<b>11.43</b>	<b>13.46</b>	<b>0.03</b>	<b>106.16</b>	<b>11.60</b>	<b>2964.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	7.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	5.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.49	0.05	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.49</b>	<b>0.05</b>	<b>5.3</b>
<b>Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.06</b>	<b>0.00</b>	<b>0.49</b>	<b>0.05</b>	<b>12.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	1	8	6
Boom/Crane Truck	350	1	8	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 54**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Shoo-fly Pole Assembly**

Compressor Trailer	0.38	1.89	2.40	0.00	0.20	0.19	281.45	0.03	0.01	284.5
Boom/Crane Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
<b>Total</b>	<b>1.44</b>	<b>5.43</b>	<b>10.97</b>	<b>0.02</b>	<b>0.51</b>	<b>0.47</b>	<b>1720.96</b>	<b>0.13</b>	<b>0.04</b>	<b>1737.57</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.00	0.01	0.01	0.00	0.00	0.00	1.13	0.00	0.00	1.1
Boom/Crane Truck	0.00	0.01	0.03	0.00	0.00	0.00	5.76	0.00	0.00	5.8
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.88</b>	<b>0.00</b>	<b>0.00</b>	<b>6.95</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	2	8	N/A	27
1-Ton Truck, 4x4	2	8	N/A	27
Boom/Crane Truck	2	10	N/A	27
Water Truck	2	10	N/A	27
Worker Commute	18	8	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

**Table 54**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Shoo-fly Pole Assembly**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.42	0.06	0.00	0.01	0.00	62.34	0.00	0.00	63.22
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92
Boom/Crane Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.25</b>	<b>6.00</b>	<b>2.48</b>	<b>0.01</b>	<b>0.18</b>	<b>0.04</b>	<b>1212.86</b>	<b>0.05</b>	<b>0.04</b>	<b>1226.60</b>
<b>Total</b>	<b>0.25</b>	<b>6.00</b>	<b>2.48</b>	<b>0.01</b>	<b>0.18</b>	<b>0.04</b>	<b>1212.86</b>	<b>0.05</b>	<b>0.04</b>	<b>1226.60</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.97
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.97
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.91	0.00	0.00	2.94
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.23</b>	<b>0.00</b>	<b>0.00</b>	<b>5.29</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.23</b>	<b>0.00</b>	<b>0.00</b>	<b>5.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 54**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Shoo-fly Pole Assembly**

3/4-Ton Truck, 4x4	2	Unpaved	17	8	0.474	0.047	16.11	1.61	0.06	0.01
3/4-Ton Truck, 4x4	2	Paved	10	8	0.003	0.001	0.07	0.02	0.00	0.00
1-Ton Truck, 4x4	2	Unpaved	17	8	0.564	0.056	19.16	1.92	0.08	0.01
1-Ton Truck, 4x4	2	Paved	10	8	0.003	0.001	0.07	0.02	0.00	0.00
Boom/Crane Truck	2	Unpaved	17	10	0.977	0.098	33.23	3.32	0.17	0.02
Boom/Crane Truck	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	2	Unpaved	17	10	0.977	0.098	33.23	3.32	0.17	0.02
Water Truck	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	18	Paved	58	8	0.003	0.001	3.48	0.85	0.01	0.00
<b>Offsite Total</b>							<b>105.47</b>	<b>11.09</b>	<b>0.49</b>	<b>0.05</b>
<b>Total</b>							<b>105.47</b>	<b>11.09</b>	<b>0.49</b>	<b>0.05</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 55**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**LST Removal**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	11.70	44.83	88.17	0.14	4.29	3.95	13,770.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>11.70</b>	<b>44.83</b>	<b>88.17</b>	<b>0.14</b>	<b>4.29</b>	<b>3.95</b>	<b>13770.5</b>
Offsite Motor Vehicle Exhaust	0.32	7.51	3.63	0.02	0.26	0.06	1,683.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	162.21	16.95	
<b>Offsite Total</b>	<b>0.32</b>	<b>7.51</b>	<b>3.63</b>	<b>0.02</b>	<b>162.46</b>	<b>17.02</b>	<b>1683.8</b>
<b>Total</b>	<b>12.03</b>	<b>52.35</b>	<b>91.80</b>	<b>0.16</b>	<b>166.76</b>	<b>20.96</b>	<b>15454.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.73	2.80	5.51	0.01	0.27	0.25	860.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.73</b>	<b>2.80</b>	<b>5.51</b>	<b>0.01</b>	<b>0.27</b>	<b>0.25</b>	<b>860.7</b>
Offsite Motor Vehicle Exhaust	0.02	0.47	0.23	0.00	0.02	0.00	105.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	10.14	1.06	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.23</b>	<b>0.00</b>	<b>10.15</b>	<b>1.06</b>	<b>105.2</b>
<b>Total</b>	<b>0.75</b>	<b>3.27</b>	<b>5.74</b>	<b>0.01</b>	<b>10.42</b>	<b>1.31</b>	<b>965.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	6	125	10
Excavator	250	1	125	10
R/T Crane (M)	215	3	125	5
R/T Crane (L)	300	6	125	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Excavator	250	0.105	0.339	0.785	0.002	0.026	0.024	158.540	0.009	0.004	Excavators
R/T Crane (M)	215	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
R/T Crane (L)	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111



**Table 55  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
LST Removal**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	3.78	18.90	24.05	0.03	2.02	1.85	2814.48	0.34	0.07	2,844.5
Excavator	1.05	3.39	7.85	0.02	0.26	0.24	1585.40	0.09	0.04	1,600.2
R/T Crane (M)	1.31	3.95	11.29	0.02	0.39	0.36	1680.87	0.12	0.04	1,696.9
R/T Crane (L)	5.56	18.60	44.98	0.07	1.62	1.49	7557.46	0.50	0.20	7,628.9
<b>Total</b>	<b>11.70</b>	<b>44.83</b>	<b>88.17</b>	<b>0.14</b>	<b>4.29</b>	<b>3.95</b>	<b>13638.22</b>	<b>1.06</b>	<b>0.36</b>	<b>13770.46</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.24	1.18	1.50	0.00	0.13	0.12	175.91	0.02	0.00	177.8
Excavator	0.07	0.21	0.49	0.00	0.02	0.02	99.09	0.01	0.00	100.0
R/T Crane (M)	0.08	0.25	0.71	0.00	0.02	0.02	105.05	0.01	0.00	106.1
R/T Crane (L)	0.35	1.16	2.81	0.00	0.10	0.09	472.34	0.03	0.01	476.8
<b>Total</b>	<b>0.73</b>	<b>2.80</b>	<b>5.51</b>	<b>0.01</b>	<b>0.27</b>	<b>0.25</b>	<b>852.39</b>	<b>0.07</b>	<b>0.02</b>	<b>860.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	6	125	N/A	27
Water Truck	2	125	N/A	27
Dump Truck	1	125	N/A	27
Flat Bed Truck/Trailer	3	125	N/A	27
Worker Commute	24	125	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

**Table 55  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
LST Removal**

Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Dump Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Truck/Trailer	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Worker Commute	0.24	6.99	0.76	0.01	0.14	0.01	970.30	0.06	0.03	981.38
<b>Offsite Total</b>	<b>0.32</b>	<b>7.51</b>	<b>3.63</b>	<b>0.02</b>	<b>0.26</b>	<b>0.06</b>	<b>1665.14</b>	<b>0.06</b>	<b>0.06</b>	<b>1683.78</b>
<b>Total</b>	<b>0.32</b>	<b>7.51</b>	<b>3.63</b>	<b>0.02</b>	<b>0.26</b>	<b>0.06</b>	<b>1665.14</b>	<b>0.06</b>	<b>0.06</b>	<b>1683.78</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	7.58	0.00	0.00	7.67
Water Truck	0.00	0.01	0.06	0.00	0.00	0.00	11.95	0.00	0.00	12.08
Dump Truck	0.00	0.00	0.03	0.00	0.00	0.00	5.97	0.00	0.00	6.04
Flat Bed Truck/Trailer	0.00	0.01	0.08	0.00	0.00	0.00	17.92	0.00	0.00	18.11
Worker Commute	0.02	0.44	0.05	0.00	0.01	0.00	60.64	0.00	0.00	61.34
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.23</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>104.07</b>	<b>0.00</b>	<b>0.00</b>	<b>105.24</b>
<b>Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.23</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>104.07</b>	<b>0.00</b>	<b>0.00</b>	<b>105.24</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 55**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**LST Removal**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	6	Unpaved	17	125	0.564	0.056	57.48	5.75	3.59	0.36
1-Ton Truck, 4x4	6	Paved	10	125	0.003	0.001	0.20	0.05	0.01	0.00
Water Truck	2	Unpaved	17	125	0.977	0.098	33.23	3.32	2.08	0.21
Water Truck	2	Paved	10	125	0.003	0.001	0.07	0.02	0.00	0.00
Dump Truck	1	Unpaved	17	125	0.977	0.098	16.62	1.66	1.04	0.10
Dump Truck	1	Paved	10	125	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Truck/Trailer	3	Unpaved	17	125	0.977	0.098	49.85	4.98	3.12	0.31
Flat Bed Truck/Trailer	3	Paved	10	125	0.003	0.001	0.10	0.02	0.01	0.00
Worker Commute	24	Paved	58	125	0.003	0.001	4.63	1.14	0.29	0.07
<b>Offsite Total</b>							<b>162.21</b>	<b>16.95</b>	<b>10.14</b>	<b>1.06</b>
<b>Total</b>							<b>162.21</b>	<b>16.95</b>	<b>10.14</b>	<b>1.06</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 56**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
LST Foundation Removal**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.67	13.49	25.93	0.06	1.09	1.01	5,551.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.67</b>	<b>13.49</b>	<b>25.93</b>	<b>0.06</b>	<b>1.09</b>	<b>1.01</b>	<b>5551.2</b>
Offsite Motor Vehicle Exhaust	0.19	5.03	1.43	0.01	0.13	0.02	879.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	44.48	4.91	
<b>Offsite Total</b>	<b>0.19</b>	<b>5.03</b>	<b>1.43</b>	<b>0.01</b>	<b>44.60</b>	<b>4.93</b>	<b>879.1</b>
<b>Total</b>	<b>3.86</b>	<b>18.52</b>	<b>27.37</b>	<b>0.07</b>	<b>45.70</b>	<b>5.94</b>	<b>6430.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.17	0.64	1.23	0.00	0.05	0.05	263.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.17</b>	<b>0.64</b>	<b>1.23</b>	<b>0.00</b>	<b>0.05</b>	<b>0.05</b>	<b>263.7</b>
Offsite Motor Vehicle Exhaust	0.01	0.24	0.07	0.00	0.01	0.00	41.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2.11	0.23	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.24</b>	<b>0.07</b>	<b>0.00</b>	<b>2.12</b>	<b>0.23</b>	<b>41.8</b>
<b>Total</b>	<b>0.18</b>	<b>0.88</b>	<b>1.30</b>	<b>0.00</b>	<b>2.17</b>	<b>0.28</b>	<b>305.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	1	95	10
Backhoe/Front Loader	350	1	95	10
Excavator	250	1	95	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Backhoe/Front Loader	350	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes
Excavator	250	0.105	0.339	0.785	0.002	0.026	0.024	158.540	0.009	0.004	Excavators

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	0.63	3.15	4.01	0.01	0.34	0.31	469.08	0.06	0.01	474.1
Backhoe/Front Loader	1.98	6.96	14.07	0.04	0.50	0.46	3445.44	0.18	0.09	3,476.9

**Table 56**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**LST Foundation Removal**

Excavator	1.05	3.39	7.85	0.02	0.26	0.24	1585.40	0.09	0.04	1,600.2
<b>Total</b>	<b>3.67</b>	<b>13.49</b>	<b>25.93</b>	<b>0.06</b>	<b>1.09</b>	<b>1.01</b>	<b>5499.92</b>	<b>0.33</b>	<b>0.14</b>	<b>5551.16</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.03	0.15	0.19	0.00	0.02	0.01	22.28	0.00	0.00	22.5
Backhoe/Front Loader	0.09	0.33	0.67	0.00	0.02	0.02	163.66	0.01	0.00	165.2
Excavator	0.05	0.16	0.37	0.00	0.01	0.01	75.31	0.00	0.00	76.0
<b>Total</b>	<b>0.17</b>	<b>0.64</b>	<b>1.23</b>	<b>0.00</b>	<b>0.05</b>	<b>0.05</b>	<b>261.25</b>	<b>0.02</b>	<b>0.01</b>	<b>263.68</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	1	95	N/A	27
Water Truck	1	95	N/A	27
Dump Truck	1	95	N/A	27
Worker Commute	16	95	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 56**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**LST Foundation Removal**

3/4-Ton Truck, 4x4	0.01	0.21	0.03	0.00	0.00	0.00	31.17	0.00	0.00	31.61
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Dump Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Worker Commute	0.16	4.66	0.51	0.01	0.10	0.00	646.87	0.04	0.02	654.25
<b>Offsite Total</b>	<b>0.19</b>	<b>5.03</b>	<b>1.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.02</b>	<b>869.21</b>	<b>0.04</b>	<b>0.03</b>	<b>879.08</b>
<b>Total</b>	<b>0.19</b>	<b>5.03</b>	<b>1.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.02</b>	<b>869.21</b>	<b>0.04</b>	<b>0.03</b>	<b>879.08</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.01	0.00	0.00	0.00	0.00	1.48	0.00	0.00	1.50
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.54	0.00	0.00	4.59
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.54	0.00	0.00	4.59
Worker Commute	0.01	0.22	0.02	0.00	0.00	0.00	30.73	0.00	0.00	31.08
<b>Offsite Total</b>	<b>0.01</b>	<b>0.24</b>	<b>0.07</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>41.29</b>	<b>0.00</b>	<b>0.00</b>	<b>41.76</b>
<b>Total</b>	<b>0.01</b>	<b>0.24</b>	<b>0.07</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>41.29</b>	<b>0.00</b>	<b>0.00</b>	<b>41.76</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	1	Unpaved	17	95	0.474	0.047	8.05	0.81	0.38	0.04
3/4-Ton Truck, 4x4	1	Paved	10	95	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	17	95	0.977	0.098	16.62	1.66	0.79	0.08
Water Truck	1	Paved	10	95	0.003	0.001	0.03	0.01	0.00	0.00
Dump Truck	1	Unpaved	17	95	0.977	0.098	16.62	1.66	0.79	0.08
Dump Truck	1	Paved	10	95	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	16	Paved	58	95	0.003	0.001	3.09	0.76	0.15	0.04
<b>Offsite Total</b>							<b>44.48</b>	<b>4.91</b>	<b>2.11</b>	<b>0.23</b>
<b>Total</b>							<b>44.48</b>	<b>4.91</b>	<b>2.11</b>	<b>0.23</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 56**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**LST Foundation Removal**

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 57**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Install LST Foundations**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	19.83	58.02	138.40	26.53	4.27	4.04	38,552.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.32	0.05	
<b>Onsite Total</b>	<b>19.83</b>	<b>58.02</b>	<b>138.40</b>	<b>26.53</b>	<b>4.59</b>	<b>4.09</b>	<b>38552.9</b>
Offsite Motor Vehicle Exhaust	1.41	17.03	42.87	0.10	1.56	0.77	10,414.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	956.14	97.22	
<b>Offsite Total</b>	<b>1.41</b>	<b>17.03</b>	<b>42.87</b>	<b>0.10</b>	<b>957.69</b>	<b>97.99</b>	<b>10414.6</b>
<b>Total</b>	<b>21.24</b>	<b>75.04</b>	<b>181.28</b>	<b>26.64</b>	<b>962.29</b>	<b>102.08</b>	<b>48967.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	1.35	5.22	9.74	0.35	0.32	0.29	2,753.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.03	0.01	
<b>Onsite Total</b>	<b>1.35</b>	<b>5.22</b>	<b>9.74</b>	<b>0.35</b>	<b>0.35</b>	<b>0.30</b>	<b>2753.8</b>
Offsite Motor Vehicle Exhaust	0.15	1.79	4.50	0.01	0.16	0.08	1,093.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	100.39	10.21	
<b>Offsite Total</b>	<b>0.15</b>	<b>1.79</b>	<b>4.50</b>	<b>0.01</b>	<b>100.56</b>	<b>10.29</b>	<b>1093.5</b>
<b>Total</b>	<b>1.50</b>	<b>7.00</b>	<b>14.24</b>	<b>0.37</b>	<b>100.91</b>	<b>10.59</b>	<b>3847.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	4	210	7
Backhoe/Front Loader	200	4	210	10
Auger Truck	500	4	210	10
Kaman K-MAX	1500	1	25	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes
Auger Truck	500	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Kaman K-MAX	1500	1.129	1.353	7.403	3.755	0.201	0.201	1978.170	0.055	0.063	See note b

<sup>a</sup> From Table 111

<sup>b</sup> All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>  
PM2.5 emissions assumed equal to PM10

SOx emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO2/lbS]

Fuel use = 283.9 kg/hr from Guidance on the Determination of Helicopter Emissions



**Table 57**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install LST Foundations**

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

CO2 emissions [lb/hr] = CO2 emission factor [kg/gal] x 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]

CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from

<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>

CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

Fuel use = 283.9 kg/hr from Guidance on the Determination of Helicopter Emissions

Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	3.71	12.40	29.99	0.05	1.08	1.00	5038.31	0.33	0.13	5,085.9
Backhoe/Front Loader	4.09	14.12	31.61	0.08	1.04	0.96	6863.31	0.37	0.18	6,926.3
Auger Truck	4.13	22.02	24.98	0.12	0.74	0.68	12441.16	0.37	0.32	12,548.9
Kaman K-MAX	7.90	9.47	51.82	26.28	1.40	1.40	13847.19	0.38	0.44	13,991.7
<b>Total</b>	<b>19.83</b>	<b>58.02</b>	<b>138.40</b>	<b>26.53</b>	<b>4.27</b>	<b>4.04</b>	<b>38189.97</b>	<b>1.46</b>	<b>1.07</b>	<b>38552.88</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.39	1.30	3.15	0.01	0.11	0.10	529.02	0.04	0.01	534.0
Backhoe/Front Loader	0.43	1.48	3.32	0.01	0.11	0.10	720.65	0.04	0.02	727.3
Auger Truck	0.43	2.31	2.62	0.01	0.08	0.07	1306.32	0.04	0.03	1,317.6
Kaman K-MAX	0.10	0.12	0.65	0.33	0.02	0.02	173.09	0.00	0.01	174.9
<b>Total</b>	<b>1.35</b>	<b>5.22</b>	<b>9.74</b>	<b>0.35</b>	<b>0.32</b>	<b>0.29</b>	<b>2729.08</b>	<b>0.12</b>	<b>0.07</b>	<b>2753.82</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	8	210	N/A	27
Boom/Crane Truck	4	210	N/A	27
Auger Truck	4	210	N/A	27
Water Truck	4	210	N/A	27
Dump Truck	8	210	N/A	27
Concrete Mixer Truck	33	210	N/A	60
Worker Commute	28	210	N/A	58

<sup>a</sup> Concrete truck based on 68,068 CY concrete (see Earthwork Fugitive PM below) over 210 days and 10 CY/truck load

**Table 57**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install LST Foundations**

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88
Boom/Crane Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Auger Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Water Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Dump Truck	0.09	0.62	3.58	0.01	0.12	0.07	764.69	0.00	0.03	772.87
Concrete Mixer Truck	0.84	5.64	32.79	0.07	1.08	0.60	7009.70	0.04	0.24	7084.60
Worker Commute	0.28	8.16	0.89	0.01	0.17	0.01	1132.02	0.07	0.04	1144.94
<b>Offsite Total</b>	<b>1.41</b>	<b>17.03</b>	<b>42.87</b>	<b>0.10</b>	<b>1.56</b>	<b>0.77</b>	<b>10302.83</b>	<b>0.13</b>	<b>0.35</b>	<b>10414.58</b>
<b>Total</b>	<b>1.41</b>	<b>17.03</b>	<b>42.87</b>	<b>0.10</b>	<b>1.56</b>	<b>0.77</b>	<b>10302.83</b>	<b>0.13</b>	<b>0.35</b>	<b>10414.58</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.01	0.18	0.03	0.00	0.00	0.00	26.18	0.00	0.00	26.55
Boom/Crane Truck	0.00	0.03	0.19	0.00	0.01	0.00	40.15	0.00	0.00	40.58
Auger Truck	0.00	0.03	0.19	0.00	0.01	0.00	40.15	0.00	0.00	40.58
Water Truck	0.00	0.03	0.19	0.00	0.01	0.00	40.15	0.00	0.00	40.58

**Table 57**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Install LST Foundations**

Dump Truck	0.01	0.06	0.38	0.00	0.01	0.01	80.29	0.00	0.00	81.15
Concrete Mixer Truck	0.09	0.59	3.44	0.01	0.11	0.06	736.02	0.00	0.03	743.88
Worker Commute	0.03	0.86	0.09	0.00	0.02	0.00	118.86	0.01	0.00	120.22
<b>Offsite Total</b>	<b>0.15</b>	<b>1.79</b>	<b>4.50</b>	<b>0.01</b>	<b>0.16</b>	<b>0.08</b>	<b>1081.80</b>	<b>0.01</b>	<b>0.04</b>	<b>1093.53</b>
<b>Total</b>	<b>0.15</b>	<b>1.79</b>	<b>4.50</b>	<b>0.01</b>	<b>0.16</b>	<b>0.08</b>	<b>1081.80</b>	<b>0.01</b>	<b>0.04</b>	<b>1093.53</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	8	Unpaved	17	210	0.474	0.047	64.43	6.44	6.76	0.68
3/4-Ton Truck, 4x4	8	Paved	10	210	0.003	0.001	0.27	0.07	0.03	0.01
Boom/Crane Truck	4	Unpaved	17	210	0.977	0.098	66.46	6.65	6.98	0.70
Boom/Crane Truck	4	Paved	10	210	0.003	0.001	0.13	0.03	0.01	0.00
Auger Truck	4	Unpaved	17	210	0.977	0.098	66.46	6.65	6.98	0.70
Auger Truck	4	Paved	10	210	0.003	0.001	0.13	0.03	0.01	0.00
Water Truck	4	Unpaved	17	210	0.977	0.098	66.46	6.65	6.98	0.70
Water Truck	4	Paved	10	210	0.003	0.001	0.13	0.03	0.01	0.00
Dump Truck	8	Unpaved	17	210	0.977	0.098	132.93	13.29	13.96	1.40
Dump Truck	8	Paved	10	210	0.003	0.001	0.27	0.07	0.03	0.01
Concrete Mixer Truck	33	Unpaved	17	210	0.977	0.098	548.32	54.83	57.57	5.76
Concrete Mixer Truck	33	Paved	43	210	0.003	0.001	4.72	1.16	0.50	0.12
Worker Commute	28	Paved	58	210	0.003	0.001	5.41	1.33	0.57	0.14
<b>Offsite Total</b>							<b>956.14</b>	<b>97.22</b>	<b>100.39</b>	<b>10.21</b>
<b>Total</b>							<b>956.14</b>	<b>97.22</b>	<b>100.39</b>	<b>10.21</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	324	68068	1.00E-03	1.52E-04	0.32	0.05	0.03	0.01
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.32</b>	<b>0.05</b>	<b>0.03</b>	<b>0.01</b>

**Table 57**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install LST Foundations**

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on 325 LSTs, 4 foundations/LST, 6 ft. diameter x 50 ft. deep each over 210 days

**Table 58**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**LST Steel Haul**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	39.67	62.12	248.50	100.37	7.11	6.96	64,385.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>39.67</b>	<b>62.12</b>	<b>248.50</b>	<b>100.37</b>	<b>7.11</b>	<b>6.96</b>	<b>64385.9</b>
Offsite Motor Vehicle Exhaust	0.56	13.48	5.98	0.03	0.38	0.09	2,780.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	326.48	33.67	
<b>Offsite Total</b>	<b>0.56</b>	<b>13.48</b>	<b>5.98</b>	<b>0.03</b>	<b>326.86</b>	<b>33.76</b>	<b>2780.3</b>
<b>Total</b>	<b>40.23</b>	<b>75.60</b>	<b>254.48</b>	<b>100.40</b>	<b>333.98</b>	<b>40.72</b>	<b>67166.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.67	1.20	4.37	1.46	0.13	0.12	1,076.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.67</b>	<b>1.20</b>	<b>4.37</b>	<b>1.46</b>	<b>0.13</b>	<b>0.12</b>	<b>1076.9</b>
Offsite Motor Vehicle Exhaust	0.02	0.37	0.16	0.00	0.01	0.00	76.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	8.98	0.93	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.37</b>	<b>0.16</b>	<b>0.00</b>	<b>8.99</b>	<b>0.93</b>	<b>76.5</b>
<b>Total</b>	<b>0.68</b>	<b>1.57</b>	<b>4.53</b>	<b>1.46</b>	<b>9.12</b>	<b>1.05</b>	<b>1153.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
R/T Forklift	200	8	55	8
Bell 212	1800	2	29	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
R/T Forklift	200	0.111	0.359	0.919	0.002	0.030	0.028	170.643	0.010	0.004	Rough Terrain Forklifts
Bell 212	1800	2.328	2.797	13.547	7.160	0.370	0.370	3772.296	0.104	0.120	See note b

<sup>a</sup> From Table 111

<sup>b</sup> All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>  
 PM2.5 emissions assumed equal to PM10

SOx emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO2/lbS]

Fuel use = 541.3 kg/hr from Guidance on the Determination of Helicopter Emissions

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

CO2 emissions [lb/hr] = CO2 emission factor [kg/gal] x 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]

**Table 58  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
LST Steel Haul**

CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from <http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>  
 CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors  
 N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors  
 Fuel use = 541.3 kg/hr from Guidance on the Determination of Helicopter Emissions  
 Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
R/T Forklift	7.08	22.97	58.84	0.12	1.93	1.78	10921.16	0.64	0.28	11,022.5
Bell 212	32.59	39.16	189.66	100.24	5.18	5.18	52812.15	1.46	1.68	53,363.4
<b>Total</b>	<b>39.67</b>	<b>62.12</b>	<b>248.50</b>	<b>100.37</b>	<b>7.11</b>	<b>6.96</b>	<b>63733.30</b>	<b>2.10</b>	<b>1.96</b>	<b>64385.86</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
R/T Forklift	0.19	0.63	1.62	0.00	0.05	0.05	300.33	0.02	0.01	303.1
Bell 212	0.47	0.57	2.75	1.45	0.08	0.08	765.78	0.02	0.02	773.8
<b>Total</b>	<b>0.67</b>	<b>1.20</b>	<b>4.37</b>	<b>1.46</b>	<b>0.13</b>	<b>0.12</b>	<b>1066.11</b>	<b>0.04</b>	<b>0.03</b>	<b>1076.89</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	16	55	N/A	27
Water Truck	2	55	N/A	27
Flat Bed Truck/Trailer	8	55	N/A	27
Worker Commute	32	55	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 58**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**LST Steel Haul**

Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.12	3.39	0.49	0.01	0.04	0.00	498.75	0.03	0.02	505.75
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Flat Bed Truck/Trailer	0.09	0.62	3.58	0.01	0.12	0.07	764.69	0.00	0.03	772.87
Worker Commute	0.33	9.32	1.02	0.02	0.19	0.01	1293.74	0.08	0.04	1308.51
<b>Offsite Total</b>	<b>0.56</b>	<b>13.48</b>	<b>5.98</b>	<b>0.03</b>	<b>0.38</b>	<b>0.09</b>	<b>2748.35</b>	<b>0.11</b>	<b>0.10</b>	<b>2780.34</b>
<b>Total</b>	<b>0.56</b>	<b>13.48</b>	<b>5.98</b>	<b>0.03</b>	<b>0.38</b>	<b>0.09</b>	<b>2748.35</b>	<b>0.11</b>	<b>0.10</b>	<b>2780.34</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.09	0.01	0.00	0.00	0.00	13.72	0.00	0.00	13.91
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	5.26	0.00	0.00	5.31
Flat Bed Truck/Trailer	0.00	0.02	0.10	0.00	0.00	0.00	21.03	0.00	0.00	21.25
Worker Commute	0.01	0.26	0.03	0.00	0.01	0.00	35.58	0.00	0.00	35.98
<b>Offsite Total</b>	<b>0.02</b>	<b>0.37</b>	<b>0.16</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>75.58</b>	<b>0.00</b>	<b>0.00</b>	<b>76.46</b>
<b>Total</b>	<b>0.02</b>	<b>0.37</b>	<b>0.16</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>75.58</b>	<b>0.00</b>	<b>0.00</b>	<b>76.46</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 58**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**LST Steel Haul**

1-Ton Truck, 4x4	16	Unpaved	17	55	0.564	0.056	153.28	15.33	4.22	0.42
1-Ton Truck, 4x4	16	Paved	10	55	0.003	0.001	0.53	0.13	0.01	0.00
Water Truck	2	Unpaved	17	55	0.977	0.098	33.23	3.32	0.91	0.09
Water Truck	2	Paved	10	55	0.003	0.001	0.07	0.02	0.00	0.00
Flat Bed Truck/Trailer	8	Unpaved	17	55	0.977	0.098	132.93	13.29	3.66	0.37
Flat Bed Truck/Trailer	8	Paved	10	55	0.003	0.001	0.27	0.07	0.01	0.00
Worker Commute	32	Paved	58	55	0.003	0.001	6.18	1.52	0.17	0.04
<b>Offsite Total</b>							<b>326.48</b>	<b>33.67</b>	<b>8.98</b>	<b>0.93</b>
<b>Total</b>							<b>326.48</b>	<b>33.67</b>	<b>8.98</b>	<b>0.93</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 59**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**LST Steel Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	19.74	62.88	141.20	26.43	5.69	5.35	28,261.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>19.74</b>	<b>62.88</b>	<b>141.20</b>	<b>26.43</b>	<b>5.69</b>	<b>5.35</b>	<b>28261.1</b>
Offsite Motor Vehicle Exhaust	0.56	15.71	1.98	0.03	0.35	0.02	2,366.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	127.00	14.17	
<b>Offsite Total</b>	<b>0.56</b>	<b>15.71</b>	<b>1.98</b>	<b>0.03</b>	<b>127.34</b>	<b>14.19</b>	<b>2366.3</b>
<b>Total</b>	<b>20.31</b>	<b>78.59</b>	<b>143.18</b>	<b>26.46</b>	<b>133.04</b>	<b>19.54</b>	<b>30627.4</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	4.66	15.78	33.60	5.29	1.40	1.31	6,508.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>4.66</b>	<b>15.78</b>	<b>33.60</b>	<b>5.29</b>	<b>1.40</b>	<b>1.31</b>	<b>6508.4</b>
Offsite Motor Vehicle Exhaust	0.15	4.08	0.52	0.01	0.09	0.01	615.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	33.02	3.68	
<b>Offsite Total</b>	<b>0.15</b>	<b>4.08</b>	<b>0.52</b>	<b>0.01</b>	<b>33.11</b>	<b>3.69</b>	<b>615.2</b>
<b>Total</b>	<b>4.81</b>	<b>19.86</b>	<b>34.12</b>	<b>5.30</b>	<b>34.51</b>	<b>5.00</b>	<b>7123.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	5	520	7
R/T Forklift	125	4	520	7
R/T Crane (L)	300	5	520	10
Kaman K-MAX	1500	1	400	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
R/T Forklift	125	0.108	0.723	0.779	0.001	0.042	0.039	124.788	0.010	0.003	Rough Terrain Forklifts
R/T Crane (L)	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Kaman K-MAX	1500	1.129	1.353	7.403	3.755	0.201	0.201	1978.170	0.055	0.063	See note b

<sup>a</sup> From Table 111

<sup>b</sup> All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>  
 PM2.5 emissions assumed equal to PM10

**Table 59  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
LST Steel Assembly**

SOx emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO2/lbS]  
 Fuel use = 283.9 kg/hr from Guidance on the Determination of Helicopter Emissions  
 Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A  
 CO2 emissions [lb/hr] = CO2 emission factor [kg/gal] x 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]  
 CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from  
<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>  
 CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors  
 N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors  
 Fuel use = 283.9 kg/hr from Guidance on the Determination of Helicopter Emissions  
 Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	2.20	11.03	14.03	0.02	1.18	1.08	1641.78	0.20	0.04	1,659.3
R/T Forklift	3.02	20.24	21.80	0.04	1.18	1.09	3494.05	0.27	0.09	3,528.1
R/T Crane (L)	6.62	22.14	53.55	0.09	1.93	1.78	8996.98	0.60	0.23	9,082.0
Kaman K-MAX	7.90	9.47	51.82	26.28	1.40	1.40	13847.19	0.38	0.44	13,991.7
<b>Total</b>	<b>19.74</b>	<b>62.88</b>	<b>141.20</b>	<b>26.43</b>	<b>5.69</b>	<b>5.35</b>	<b>27980.00</b>	<b>1.45</b>	<b>0.81</b>	<b>28261.11</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.57	2.87	3.65	0.01	0.31	0.28	426.86	0.05	0.01	431.4
R/T Forklift	0.79	5.26	5.67	0.01	0.31	0.28	908.45	0.07	0.02	917.3
R/T Crane (L)	1.72	5.76	13.92	0.02	0.50	0.46	2339.21	0.16	0.06	2,361.3
Kaman K-MAX	1.58	1.89	10.36	5.26	0.28	0.28	2769.44	0.08	0.09	2,798.3
<b>Total</b>	<b>4.66</b>	<b>15.78</b>	<b>33.60</b>	<b>5.29</b>	<b>1.40</b>	<b>1.31</b>	<b>6443.97</b>	<b>0.35</b>	<b>0.18</b>	<b>6508.39</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	5	520	N/A	27
1-Ton Truck, 4x4	8	520	N/A	27
Worker Commute	50	520	N/A	58

**Motor Vehicle Exhaust Emission Factors**

**Table 59**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**LST Steel Assembly**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.04	1.06	0.15	0.00	0.01	0.00	155.86	0.01	0.01	158.05
1-Ton Truck, 4x4	0.01	0.08	0.24	0.00	0.03	0.01	161.75	0.00	0.01	163.67
Worker Commute	0.51	14.57	1.59	0.02	0.30	0.01	2021.47	0.12	0.07	2044.54
<b>Offsite Total</b>	<b>0.56</b>	<b>15.71</b>	<b>1.98</b>	<b>0.03</b>	<b>0.35</b>	<b>0.02</b>	<b>2339.08</b>	<b>0.13</b>	<b>0.08</b>	<b>2366.26</b>
<b>Total</b>	<b>0.56</b>	<b>15.71</b>	<b>1.98</b>	<b>0.03</b>	<b>0.35</b>	<b>0.02</b>	<b>2339.08</b>	<b>0.13</b>	<b>0.08</b>	<b>2366.26</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.01	0.28	0.04	0.00	0.00	0.00	40.52	0.00	0.00	41.09
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	42.06	0.00	0.00	42.56
Worker Commute	0.13	3.79	0.41	0.01	0.08	0.00	525.58	0.03	0.02	531.58
<b>Offsite Total</b>	<b>0.15</b>	<b>4.08</b>	<b>0.52</b>	<b>0.01</b>	<b>0.09</b>	<b>0.01</b>	<b>608.16</b>	<b>0.03</b>	<b>0.02</b>	<b>615.23</b>
<b>Total</b>	<b>0.15</b>	<b>4.08</b>	<b>0.52</b>	<b>0.01</b>	<b>0.09</b>	<b>0.01</b>	<b>608.16</b>	<b>0.03</b>	<b>0.02</b>	<b>615.23</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 59**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**LST Steel Assembly**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	5	Unpaved	17	520	0.474	0.047	40.27	4.03	10.47	1.05
3/4-Ton Truck, 4x4	5	Paved	10	520	0.003	0.001	0.17	0.04	0.04	0.01
1-Ton Truck, 4x4	8	Unpaved	17	520	0.564	0.056	76.64	7.66	19.93	1.99
1-Ton Truck, 4x4	8	Paved	10	520	0.003	0.001	0.27	0.07	0.07	0.02
Worker Commute	50	Paved	58	520	0.003	0.001	9.66	2.37	2.51	0.62
<b>Offsite Total</b>							<b>127.00</b>	<b>14.17</b>	<b>33.02</b>	<b>3.68</b>
<b>Total</b>							<b>127.00</b>	<b>14.17</b>	<b>33.02</b>	<b>3.68</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 60**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**LST Erection**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	70.00	104.00	750.85	238.25	17.21	16.99	136,353.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>70.00</b>	<b>104.00</b>	<b>750.85</b>	<b>238.25</b>	<b>17.21</b>	<b>16.99</b>	<b>136353.4</b>
Offsite Motor Vehicle Exhaust	0.74	19.64	4.63	0.04	0.49	0.07	3,353.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	236.43	25.43	
<b>Offsite Total</b>	<b>0.74</b>	<b>19.64</b>	<b>4.63</b>	<b>0.04</b>	<b>236.92</b>	<b>25.50</b>	<b>3353.0</b>
<b>Total</b>	<b>70.74</b>	<b>123.64</b>	<b>755.48</b>	<b>238.29</b>	<b>254.13</b>	<b>42.49</b>	<b>139706.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	7.19	12.37	32.09	9.48	0.98	0.93	6,809.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>7.19</b>	<b>12.37</b>	<b>32.09</b>	<b>9.48</b>	<b>0.98</b>	<b>0.93</b>	<b>6809.5</b>
Offsite Motor Vehicle Exhaust	0.14	3.63	0.86	0.01	0.09	0.01	620.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	43.74	4.70	
<b>Offsite Total</b>	<b>0.14</b>	<b>3.63</b>	<b>0.86</b>	<b>0.01</b>	<b>43.83</b>	<b>4.72</b>	<b>620.3</b>
<b>Total</b>	<b>7.33</b>	<b>16.00</b>	<b>32.95</b>	<b>9.49</b>	<b>44.81</b>	<b>5.65</b>	<b>7429.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	60	4	370	7
R/T Crane (M)	215	4	370	7
R/T Crane (L)	275	4	370	7
Hughes 500 E Helicopter	420	3	275	7
Sikorsky S64	9000	2	50	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	60	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
R/T Crane (M)	215	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
R/T Crane (L)	275	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Hughes 500 E Helicopter	420	1.765	2.199	1.421	1.485	0.044	0.044	782.418	0.022	0.025	See note b
Sikorsky S64	9000	1.786	2.088	47.051	14.783	0.966	0.966	7788.012	0.216	0.248	See note c

<sup>a</sup> From Table 111

<sup>b</sup> All except SOX, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of

**Table 60  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
LST Erection**

Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>  
PM2.5 emissions assumed equal to PM10

$$\text{SOx emissions [lb/hr]} = \text{Fuel use [kg/hr]} \times 1000 \text{ [g/kg]} / 453.6 \text{ [g/lb]} \times \text{Fuel sulfur [wt. \%]} / 100 \times 2 \text{ [lb SO}_2\text{/lbS]}$$

Fuel use = 112.3 kg/hr from Guidance on the Determination of Helicopter Emissions

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

$$\text{CO}_2 \text{ emissions [lb/hr]} = \text{CO}_2 \text{ emission factor [kg/gal]} \times 1000 \text{ [g/kg]} / 453.6 \text{ [g/lb]} \times \text{Fuel use [kg/hr]} \times 1000 \text{ [g/kg]} / 453.6 \text{ [g/lb]} / \text{Fuel density [lb/gal]}$$

CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from

<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>

CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

Fuel use = 112.3 kg/hr from Guidance on the Determination of Helicopter Emissions

Jet-A density = 6.8 lb/gal

<sup>c</sup> All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>  
PM2.5 emissions assumed equal to PM10

$$\text{SOx emissions [lb/hr]} = \text{Fuel use [kg/hr]} \times 1000 \text{ [g/kg]} / 453.6 \text{ [g/lb]} \times \text{Fuel sulfur [wt. \%]} / 100 \times 2 \text{ [lb SO}_2\text{/lbS]}$$

Fuel use = 1,118 kg/hr from Guidance on the Determination of Helicopter Emissions

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

$$\text{CO}_2 \text{ emissions [lb/hr]} = \text{CO}_2 \text{ emission factor [kg/gal]} \times 1000 \text{ [g/kg]} / 453.6 \text{ [g/lb]} \times \text{Fuel use [kg/hr]} \times 1000 \text{ [g/kg]} / 453.6 \text{ [g/lb]} / \text{Fuel density [lb/gal]}$$

CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from

<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>

CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Action Registry Default Emission Factors

Fuel use = 1,118 kg/hr from Guidance on the Determination of Helicopter Emissions

Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.76	8.82	11.22	0.02	0.94	0.87	1313.43	0.16	0.03	1,327.4
R/T Crane (M)	2.45	7.37	21.07	0.04	0.73	0.67	3137.63	0.22	0.08	3,167.5
R/T Crane (L)	3.71	12.40	29.99	0.05	1.08	1.00	5038.31	0.33	0.13	5,085.9
Hughes 500 E Helicopter	37.08	46.18	29.85	31.19	0.93	0.93	16430.79	0.46	0.52	16,602.3
Sikorsky S64	25.01	29.24	658.72	206.96	13.53	13.53	109032.17	3.02	3.47	110,170.2
<b>Total</b>	<b>70.00</b>	<b>104.00</b>	<b>750.85</b>	<b>238.25</b>	<b>17.21</b>	<b>16.99</b>	<b>134952.32</b>	<b>4.19</b>	<b>4.24</b>	<b>136353.44</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.33	1.63	2.08	0.00	0.17	0.16	242.98	0.03	0.01	245.6
R/T Crane (M)	0.45	1.36	3.90	0.01	0.13	0.12	580.46	0.04	0.02	586.0
R/T Crane (L)	0.69	2.29	5.55	0.01	0.20	0.18	932.09	0.06	0.02	940.9
Hughes 500 E Helicopter	5.10	6.35	4.10	4.29	0.13	0.13	2259.23	0.06	0.07	2,282.8

**Table 60  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
LST Erection**

Sikorsky S64	0.63	0.73	16.47	5.17	0.34	0.34	2725.80	0.08	0.09	2,754.3
<b>Total</b>	<b>7.19</b>	<b>12.37</b>	<b>32.09</b>	<b>9.48</b>	<b>0.98</b>	<b>0.93</b>	<b>6740.57</b>	<b>0.27</b>	<b>0.20</b>	<b>6809.54</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	8	370	N/A	27
1-Ton Truck, 4x4	8	370	N/A	27
Jet A Fuel Truck	1	370	N/A	27
Water Truck	4	370	N/A	27
Worker Commute	60	370	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Jet A Fuel Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88
1-Ton Truck, 4x4	0.01	0.08	0.24	0.00	0.03	0.01	161.75	0.00	0.01	163.67
Jet A Fuel Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Water Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Worker Commute	0.61	17.48	1.91	0.03	0.36	0.01	2425.76	0.15	0.08	2453.45
<b>Offsite Total</b>	<b>0.74</b>	<b>19.64</b>	<b>4.63</b>	<b>0.04</b>	<b>0.49</b>	<b>0.07</b>	<b>3314.82</b>	<b>0.17</b>	<b>0.11</b>	<b>3353.04</b>
<b>Total</b>	<b>0.74</b>	<b>19.64</b>	<b>4.63</b>	<b>0.04</b>	<b>0.49</b>	<b>0.07</b>	<b>3314.82</b>	<b>0.17</b>	<b>0.11</b>	<b>3353.04</b>

**Table 60  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
LST Erection**

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.01	0.31	0.05	0.00	0.00	0.00	46.13	0.00	0.00	46.78
1-Ton Truck, 4x4	0.00	0.01	0.04	0.00	0.01	0.00	29.92	0.00	0.00	30.28
Jet A Fuel Truck	0.00	0.01	0.08	0.00	0.00	0.00	17.68	0.00	0.00	17.87
Water Truck	0.01	0.06	0.33	0.00	0.01	0.01	70.73	0.00	0.00	71.49
Worker Commute	0.11	3.23	0.35	0.01	0.07	0.00	448.77	0.03	0.01	453.89
<b>Offsite Total</b>	<b>0.14</b>	<b>3.63</b>	<b>0.86</b>	<b>0.01</b>	<b>0.09</b>	<b>0.01</b>	<b>613.24</b>	<b>0.03</b>	<b>0.02</b>	<b>620.31</b>
<b>Total</b>	<b>0.14</b>	<b>3.63</b>	<b>0.86</b>	<b>0.01</b>	<b>0.09</b>	<b>0.01</b>	<b>613.24</b>	<b>0.03</b>	<b>0.02</b>	<b>620.31</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	8	Unpaved	17	370	0.474	0.047	64.43	6.44	11.92	1.19
3/4-Ton Truck, 4x4	8	Paved	10	370	0.003	0.001	0.27	0.07	0.05	0.01
1-Ton Truck, 4x4	8	Unpaved	17	370	0.564	0.056	76.64	7.66	14.18	1.42
1-Ton Truck, 4x4	8	Paved	10	370	0.003	0.001	0.27	0.07	0.05	0.01
Jet A Fuel Truck	1	Unpaved	17	370	0.977	0.098	16.62	1.66	3.07	0.31
Jet A Fuel Truck	1	Paved	10	370	0.003	0.001	0.03	0.01	0.01	0.00
Water Truck	4	Unpaved	17	370	0.977	0.098	66.46	6.65	12.30	1.23
Water Truck	4	Paved	10	370	0.003	0.001	0.13	0.03	0.02	0.01
Worker Commute	60	Paved	58	370	0.003	0.001	11.59	2.84	2.14	0.53
<b>Offsite Total</b>							<b>236.43</b>	<b>25.43</b>	<b>43.74</b>	<b>4.70</b>
<b>Total</b>							<b>236.43</b>	<b>25.43</b>	<b>43.74</b>	<b>4.70</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**



**Table 60**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**LST Erection**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 61**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Install TSP Foundations**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	5.96	24.27	43.29	0.12	1.43	1.32	12,280.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.15	0.02	
<b>Onsite Total</b>	<b>5.96</b>	<b>24.27</b>	<b>43.29</b>	<b>0.12</b>	<b>1.58</b>	<b>1.34</b>	<b>12280.6</b>
Offsite Motor Vehicle Exhaust	0.64	7.94	19.05	0.05	0.69	0.34	4,673.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	435.42	44.26	
<b>Offsite Total</b>	<b>0.64</b>	<b>7.94</b>	<b>19.05</b>	<b>0.05</b>	<b>436.11</b>	<b>44.60</b>	<b>4673.5</b>
<b>Total</b>	<b>6.60</b>	<b>32.22</b>	<b>62.34</b>	<b>0.17</b>	<b>437.69</b>	<b>45.94</b>	<b>16954.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	1.02	4.00	7.49	0.02	0.25	0.23	1,988.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>1.02</b>	<b>4.00</b>	<b>7.49</b>	<b>0.02</b>	<b>0.26</b>	<b>0.23</b>	<b>1988.9</b>
Offsite Motor Vehicle Exhaust	0.10	1.35	2.78	0.01	0.10	0.05	705.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	67.41	6.86	
<b>Offsite Total</b>	<b>0.10</b>	<b>1.35</b>	<b>2.78</b>	<b>0.01</b>	<b>67.51</b>	<b>6.91</b>	<b>705.6</b>
<b>Total</b>	<b>1.12</b>	<b>5.35</b>	<b>10.27</b>	<b>0.03</b>	<b>67.77</b>	<b>7.14</b>	<b>2694.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	2	375	7
Backhoe/Front Loader	200	2	375	10
Auger Truck	500	2	275	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes
Auger Truck	500	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	1.85	6.20	14.99	0.02	0.54	0.50	2519.15	0.17	0.07	2,543.0
Backhoe/Front Loader	2.05	7.06	15.80	0.04	0.52	0.48	3431.66	0.18	0.09	3,463.1

**Table 61**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Install TSP Foundations**

Auger Truck	2.06	11.01	12.49	0.06	0.37	0.34	6220.58	0.19	0.16	6,274.5
<b>Total</b>	<b>5.96</b>	<b>24.27</b>	<b>43.29</b>	<b>0.12</b>	<b>1.43</b>	<b>1.32</b>	<b>12171.39</b>	<b>0.54</b>	<b>0.32</b>	<b>12280.57</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.35	1.16	2.81	0.00	0.10	0.09	472.34	0.03	0.01	476.8
Backhoe/Front Loader	0.38	1.32	2.96	0.01	0.10	0.09	643.44	0.03	0.02	649.3
Auger Truck	0.28	1.51	1.72	0.01	0.05	0.05	855.33	0.03	0.02	862.7
<b>Total</b>	<b>1.02</b>	<b>4.00</b>	<b>7.49</b>	<b>0.02</b>	<b>0.25</b>	<b>0.23</b>	<b>1971.11</b>	<b>0.09</b>	<b>0.05</b>	<b>1988.88</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	375	N/A	27
Boom/Crane Truck	2	375	N/A	27
Auger Truck	2	275	N/A	27
Water Truck	2	375	N/A	27
Dump Truck	2	375	N/A	27
Concrete Mixer Truck	15	275	N/A	60
Worker Commute	12	375	N/A	58

<sup>a</sup> Concrete mixer trucks based on 148 CY/TSP, 1 TSP/day and 10 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Table 61**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install TSP Foundations**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.05	1.27	0.19	0.00	0.02	0.00	187.03	0.01	0.01	189.66
Boom/Crane Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Auger Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Dump Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Concrete Mixer Truck	0.38	2.56	14.91	0.03	0.49	0.27	3186.23	0.02	0.11	3220.27
Worker Commute	0.12	3.50	0.38	0.01	0.07	0.00	485.15	0.03	0.02	490.69
<b>Offsite Total</b>	<b>0.64</b>	<b>7.94</b>	<b>19.05</b>	<b>0.05</b>	<b>0.69</b>	<b>0.34</b>	<b>4623.10</b>	<b>0.06</b>	<b>0.16</b>	<b>4673.48</b>
<b>Total</b>	<b>0.64</b>	<b>7.94</b>	<b>19.05</b>	<b>0.05</b>	<b>0.69</b>	<b>0.34</b>	<b>4623.10</b>	<b>0.06</b>	<b>0.16</b>	<b>4673.48</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.01	0.24	0.03	0.00	0.00	0.00	35.07	0.00	0.00	35.56
Boom/Crane Truck	0.00	0.03	0.17	0.00	0.01	0.00	35.85	0.00	0.00	36.23
Auger Truck	0.00	0.02	0.12	0.00	0.00	0.00	26.29	0.00	0.00	26.57
Water Truck	0.00	0.03	0.17	0.00	0.01	0.00	35.85	0.00	0.00	36.23
Dump Truck	0.00	0.03	0.17	0.00	0.01	0.00	35.85	0.00	0.00	36.23
Concrete Mixer Truck	0.05	0.35	2.05	0.00	0.07	0.04	438.11	0.00	0.01	442.79
Worker Commute	0.02	0.66	0.07	0.00	0.01	0.00	90.97	0.01	0.00	92.00
<b>Offsite Total</b>	<b>0.10</b>	<b>1.35</b>	<b>2.78</b>	<b>0.01</b>	<b>0.10</b>	<b>0.05</b>	<b>697.96</b>	<b>0.01</b>	<b>0.02</b>	<b>705.60</b>
<b>Total</b>	<b>0.10</b>	<b>1.35</b>	<b>2.78</b>	<b>0.01</b>	<b>0.10</b>	<b>0.05</b>	<b>697.96</b>	<b>0.01</b>	<b>0.02</b>	<b>705.60</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 61**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install TSP Foundations**

<b>Offsite</b>										
3/4-Ton Truck, 4x4	6	Unpaved	17	375	0.474	0.047	48.32	4.83	9.06	0.91
3/4-Ton Truck, 4x4	6	Paved	10	375	0.003	0.001	0.20	0.05	0.04	0.01
Boom/Crane Truck	2	Unpaved	17	375	0.977	0.098	33.23	3.32	6.23	0.62
Boom/Crane Truck	2	Paved	10	375	0.003	0.001	0.07	0.02	0.01	0.00
Auger Truck	2	Unpaved	17	275	0.977	0.098	33.23	3.32	4.57	0.46
Auger Truck	2	Paved	10	275	0.003	0.001	0.07	0.02	0.01	0.00
Water Truck	2	Unpaved	17	375	0.977	0.098	33.23	3.32	6.23	0.62
Water Truck	2	Paved	10	375	0.003	0.001	0.07	0.02	0.01	0.00
Dump Truck	2	Unpaved	17	375	0.977	0.098	33.23	3.32	6.23	0.62
Dump Truck	2	Paved	10	375	0.003	0.001	0.07	0.02	0.01	0.00
Concrete Mixer Truck	15	Unpaved	17	275	0.977	0.098	249.24	24.92	34.27	3.43
Concrete Mixer Truck	15	Paved	43	275	0.003	0.001	2.15	0.53	0.30	0.07
Worker Commute	12	Paved	58	375	0.003	0.001	2.32	0.57	0.43	0.11
<b>Offsite Total</b>							<b>435.42</b>	<b>44.26</b>	<b>67.41</b>	<b>6.86</b>
<b>Total</b>							<b>435.42</b>	<b>44.26</b>	<b>67.41</b>	<b>6.86</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling <sup>d</sup>	CY	148	12978	1.00E-03	1.52E-04	0.15	0.02	0.01	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.15</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Daily based on 1 TSP, 13 ft. diameter x 30 ft. deep; total based on 88 TSPs

**Table 62**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Haul**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.06	3.54	8.57	0.01	0.31	0.28	1,453.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.06</b>	<b>3.54</b>	<b>8.57</b>	<b>0.01</b>	<b>0.31</b>	<b>0.28</b>	<b>1453.1</b>
Offsite Motor Vehicle Exhaust	0.10	1.90	1.98	0.01	0.09	0.03	613.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	83.54	8.50	
<b>Offsite Total</b>	<b>0.10</b>	<b>1.90</b>	<b>1.98</b>	<b>0.01</b>	<b>83.63</b>	<b>8.53</b>	<b>613.2</b>
<b>Total</b>	<b>1.16</b>	<b>5.44</b>	<b>10.55</b>	<b>0.02</b>	<b>83.94</b>	<b>8.81</b>	<b>2066.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.04	0.14	0.34	0.00	0.01	0.01	58.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.04</b>	<b>0.14</b>	<b>0.34</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>58.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.08	0.00	0.00	0.00	24.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.34	0.34	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>0.00</b>	<b>3.35</b>	<b>0.34</b>	<b>24.5</b>
<b>Total</b>	<b>0.05</b>	<b>0.22</b>	<b>0.42</b>	<b>0.00</b>	<b>3.36</b>	<b>0.35</b>	<b>82.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	1	80	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1

**Table 62**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Haul**

<b>Total</b>	<b>1.06</b>	<b>3.54</b>	<b>8.57</b>	<b>0.01</b>	<b>0.31</b>	<b>0.28</b>	<b>1439.52</b>	<b>0.10</b>	<b>0.04</b>	<b>1453.12</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.04	0.14	0.34	0.00	0.01	0.01	57.58	0.00	0.00	58.1
<b>Total</b>	<b>0.04</b>	<b>0.14</b>	<b>0.34</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>57.58</b>	<b>0.00</b>	<b>0.00</b>	<b>58.12</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	2	80	N/A	27
Boom/Crane Truck	1	80	N/A	27
Water Truck	1	80	N/A	27
Flat Bed Pole Truck	2	80	N/A	27
Worker Commute	4	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Pole Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
---------	---------------------------	--------------------------	---------------------------	---------------------------	----------------------------	-----------------------------	---------------------------	---------------------------	---------------------------	----------------------------

**Table 62**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Haul**

<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.42	0.06	0.00	0.01	0.00	62.34	0.00	0.00	63.22
Boom/Crane Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Pole Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.10</b>	<b>1.90</b>	<b>1.98</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>606.41</b>	<b>0.02</b>	<b>0.02</b>	<b>613.21</b>
<b>Total</b>	<b>0.10</b>	<b>1.90</b>	<b>1.98</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>606.41</b>	<b>0.02</b>	<b>0.02</b>	<b>613.21</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	2.49	0.00	0.00	2.53
Boom/Crane Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.82	0.00	0.00	3.86
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.82	0.00	0.00	3.86
Flat Bed Pole Truck	0.00	0.01	0.04	0.00	0.00	0.00	7.65	0.00	0.00	7.73
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.47	0.00	0.00	6.54
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>24.26</b>	<b>0.00</b>	<b>0.00</b>	<b>24.53</b>
<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>24.26</b>	<b>0.00</b>	<b>0.00</b>	<b>24.53</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	2	Unpaved	17	80	0.474	0.047	16.11	1.61	0.64	0.06



**Table 62**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Haul**

3/4-Ton Truck, 4x4	2	Paved	10	80	0.003	0.001	0.07	0.02	0.00	0.00
Boom/Crane Truck	1	Unpaved	17	80	0.977	0.098	16.62	1.66	0.66	0.07
Boom/Crane Truck	1	Paved	10	80	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	17	80	0.977	0.098	16.62	1.66	0.66	0.07
Water Truck	1	Paved	10	80	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Pole Truck	2	Unpaved	17	80	0.977	0.098	33.23	3.32	1.33	0.13
Flat Bed Pole Truck	2	Paved	10	80	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	80	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>83.54</b>	<b>8.50</b>	<b>3.34</b>	<b>0.34</b>
<b>Total</b>							<b>83.54</b>	<b>8.50</b>	<b>3.34</b>	<b>0.34</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 63  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
TSP Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.91	14.97	29.71	0.05	1.42	1.30	4,667.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4667.8</b>
Offsite Motor Vehicle Exhaust	0.29	6.88	2.73	0.02	0.21	0.05	1,434.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	176.27	18.21	
<b>Offsite Total</b>	<b>0.29</b>	<b>6.88</b>	<b>2.73</b>	<b>0.02</b>	<b>176.48</b>	<b>18.26</b>	<b>1434.9</b>
<b>Total</b>	<b>4.20</b>	<b>21.85</b>	<b>32.43</b>	<b>0.06</b>	<b>177.90</b>	<b>19.56</b>	<b>6102.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.34	0.67	0.00	0.03	0.03	105.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.09</b>	<b>0.34</b>	<b>0.67</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>105.0</b>
Offsite Motor Vehicle Exhaust	0.01	0.15	0.06	0.00	0.00	0.00	32.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.97	0.41	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.06</b>	<b>0.00</b>	<b>3.97</b>	<b>0.41</b>	<b>32.3</b>
<b>Total</b>	<b>0.09</b>	<b>0.49</b>	<b>0.73</b>	<b>0.00</b>	<b>4.00</b>	<b>0.44</b>	<b>137.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	3	45	6
Boom/Crane Truck	350	3	45	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 63**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Assembly**

Compressor Trailer	1.13	5.67	7.21	0.01	0.60	0.56	844.35	0.10	0.02	853.4
Boom/Crane Truck	2.78	9.30	22.49	0.04	0.81	0.75	3778.73	0.25	0.10	3,814.4
<b>Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4623.08</b>	<b>0.35</b>	<b>0.12</b>	<b>4667.80</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.03	0.13	0.16	0.00	0.01	0.01	19.00	0.00	0.00	19.2
Boom/Crane Truck	0.06	0.21	0.51	0.00	0.02	0.02	85.02	0.01	0.00	85.8
<b>Total</b>	<b>0.09</b>	<b>0.34</b>	<b>0.67</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>104.02</b>	<b>0.01</b>	<b>0.00</b>	<b>105.03</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	45	N/A	27
1-Ton Truck, 4x4	6	45	N/A	27
Boom/Crane Truck	3	45	N/A	27
Water Truck	1	45	N/A	27
Worker Commute	18	45	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

**Table 63  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
TSP Assembly**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.05	1.27	0.19	0.00	0.02	0.00	187.03	0.01	0.01	189.66
1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Boom/Crane Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.29</b>	<b>6.88</b>	<b>2.73</b>	<b>0.02</b>	<b>0.21</b>	<b>0.05</b>	<b>1418.42</b>	<b>0.06</b>	<b>0.05</b>	<b>1434.88</b>
<b>Total</b>	<b>0.29</b>	<b>6.88</b>	<b>2.73</b>	<b>0.02</b>	<b>0.21</b>	<b>0.05</b>	<b>1418.42</b>	<b>0.06</b>	<b>0.05</b>	<b>1434.88</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.03	0.00	0.00	0.00	0.00	4.21	0.00	0.00	4.27
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	2.73	0.00	0.00	2.76
Boom/Crane Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.45	0.00	0.00	6.52
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.15	0.00	0.00	2.17
Worker Commute	0.00	0.12	0.01	0.00	0.00	0.00	16.37	0.00	0.00	16.56
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>31.91</b>	<b>0.00</b>	<b>0.00</b>	<b>32.28</b>
<b>Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>31.91</b>	<b>0.00</b>	<b>0.00</b>	<b>32.28</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 63  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
TSP Assembly**

3/4-Ton Truck, 4x4	6	Unpaved	17	45	0.474	0.047	48.32	4.83	1.09	0.11
3/4-Ton Truck, 4x4	6	Paved	10	45	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Truck, 4x4	6	Unpaved	17	45	0.564	0.056	57.48	5.75	1.29	0.13
1-Ton Truck, 4x4	6	Paved	10	45	0.003	0.001	0.20	0.05	0.00	0.00
Boom/Crane Truck	3	Unpaved	17	45	0.977	0.098	49.85	4.98	1.12	0.11
Boom/Crane Truck	3	Paved	10	45	0.003	0.001	0.10	0.02	0.00	0.00
Water Truck	1	Unpaved	17	45	0.977	0.098	16.62	1.66	0.37	0.04
Water Truck	1	Paved	10	45	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	18	Paved	58	45	0.003	0.001	3.48	0.85	0.08	0.02
<b>Offsite Total</b>							<b>176.27</b>	<b>18.21</b>	<b>3.97</b>	<b>0.41</b>
<b>Total</b>							<b>176.27</b>	<b>18.21</b>	<b>3.97</b>	<b>0.41</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 64**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Erection**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.91	14.97	29.71	0.05	1.42	1.30	4,667.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4667.8</b>
Offsite Motor Vehicle Exhaust	0.25	6.65	1.39	0.01	0.16	0.02	1,145.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	126.33	13.20	
<b>Offsite Total</b>	<b>0.25</b>	<b>6.65</b>	<b>1.39</b>	<b>0.01</b>	<b>126.49</b>	<b>13.22</b>	<b>1145.1</b>
<b>Total</b>	<b>4.16</b>	<b>21.62</b>	<b>31.09</b>	<b>0.06</b>	<b>127.91</b>	<b>14.53</b>	<b>5812.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.34	0.67	0.00	0.03	0.03	105.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.09</b>	<b>0.34</b>	<b>0.67</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>105.0</b>
Offsite Motor Vehicle Exhaust	0.01	0.15	0.03	0.00	0.00	0.00	25.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2.84	0.30	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.03</b>	<b>0.00</b>	<b>2.85</b>	<b>0.30</b>	<b>25.8</b>
<b>Total</b>	<b>0.09</b>	<b>0.49</b>	<b>0.70</b>	<b>0.00</b>	<b>2.88</b>	<b>0.33</b>	<b>130.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	3	45	6
R/T Crane (L)	350	3	45	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
R/T Crane (L)	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 64**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Erection**

Compressor Trailer	1.13	5.67	7.21	0.01	0.60	0.56	844.35	0.10	0.02	853.4
R/T Crane (L)	2.78	9.30	22.49	0.04	0.81	0.75	3778.73	0.25	0.10	3,814.4
<b>Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4623.08</b>	<b>0.35</b>	<b>0.12</b>	<b>4667.80</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
Compressor Trailer	0.03	0.13	0.16	0.00	0.01	0.01	19.00	0.00	0.00	19.2
R/T Crane (L)	0.06	0.21	0.51	0.00	0.02	0.02	85.02	0.01	0.00	85.8
<b>Total</b>	<b>0.09</b>	<b>0.34</b>	<b>0.67</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>104.02</b>	<b>0.01</b>	<b>0.00</b>	<b>105.03</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	45	N/A	27
1-Ton Truck, 4x4	6	45	N/A	27
Water Truck	1	45	N/A	27
Worker Commute	18	45	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO <sub>2</sub> (lb/mi) <sup>a</sup>	CH <sub>4</sub> (lb/mi) <sup>a</sup>	N <sub>2</sub> O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO <sub>2</sub> (lb/day) <sup>a</sup>	CH <sub>4</sub> (lb/day) <sup>a</sup>	N <sub>2</sub> O (lb/day) <sup>a</sup>	CO <sub>2</sub> e (lb/day) <sup>b</sup>
---------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	--	--	---	--

**Table 64**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Erection**

Onsite										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Offsite										
3/4-Ton Truck, 4x4	0.05	1.27	0.19	0.00	0.02	0.00	187.03	0.01	0.01	189.66
1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.25</b>	<b>6.65</b>	<b>1.39</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>1131.66</b>	<b>0.06</b>	<b>0.04</b>	<b>1145.05</b>
<b>Total</b>	<b>0.25</b>	<b>6.65</b>	<b>1.39</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>1131.66</b>	<b>0.06</b>	<b>0.04</b>	<b>1145.05</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
Onsite										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Offsite										
3/4-Ton Truck, 4x4	0.00	0.03	0.00	0.00	0.00	0.00	4.21	0.00	0.00	4.27
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	2.73	0.00	0.00	2.76
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.15	0.00	0.00	2.17
Worker Commute	0.00	0.12	0.01	0.00	0.00	0.00	16.37	0.00	0.00	16.56
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>25.46</b>	<b>0.00</b>	<b>0.00</b>	<b>25.76</b>
<b>Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>25.46</b>	<b>0.00</b>	<b>0.00</b>	<b>25.76</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Onsite										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Offsite										
3/4-Ton Truck, 4x4	6	Unpaved	17	45	0.474	0.047	48.32	4.83	1.09	0.11
3/4-Ton Truck, 4x4	6	Paved	10	45	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Truck, 4x4	6	Unpaved	17	45	0.564	0.056	57.48	5.75	1.29	0.13
1-Ton Truck, 4x4	6	Paved	10	45	0.003	0.001	0.20	0.05	0.00	0.00



**Table 64**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Erection**

Water Truck	1	Unpaved	17	45	0.977	0.098	16.62	1.66	0.37	0.04
Water Truck	1	Paved	10	45	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	18	Paved	58	45	0.003	0.001	3.48	0.85	0.08	0.02
<b>Offsite Total</b>							<b>126.33</b>	<b>13.20</b>	<b>2.84</b>	<b>0.30</b>
<b>Total</b>							<b>126.33</b>	<b>13.20</b>	<b>2.84</b>	<b>0.30</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 65**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Install/Transfer Conductor**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	46.32	116.44	206.41	21.16	7.11	6.59	48,424.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>46.32</b>	<b>116.44</b>	<b>206.41</b>	<b>21.16</b>	<b>7.11</b>	<b>6.59</b>	<b>48424.3</b>
Offsite Motor Vehicle Exhaust	1.86	49.80	11.50	0.10	1.22	0.16	8,262.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	344.53	39.19	
<b>Offsite Total</b>	<b>1.86</b>	<b>49.80</b>	<b>11.50</b>	<b>0.10</b>	<b>345.74</b>	<b>39.35</b>	<b>8262.3</b>
<b>Total</b>	<b>48.19</b>	<b>166.24</b>	<b>217.91</b>	<b>21.26</b>	<b>352.85</b>	<b>45.94</b>	<b>56686.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	5.20	12.06	22.31	2.53	0.75	0.69	5,209.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>5.20</b>	<b>12.06</b>	<b>22.31</b>	<b>2.53</b>	<b>0.75</b>	<b>0.69</b>	<b>5209.1</b>
Offsite Motor Vehicle Exhaust	0.28	7.45	1.63	0.01	0.18	0.02	1,219.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	47.84	5.49	
<b>Offsite Total</b>	<b>0.28</b>	<b>7.45</b>	<b>1.63</b>	<b>0.01</b>	<b>48.02</b>	<b>5.52</b>	<b>1219.3</b>
<b>Total</b>	<b>5.48</b>	<b>19.51</b>	<b>23.94</b>	<b>2.55</b>	<b>48.76</b>	<b>6.21</b>	<b>6428.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Manlift/Bucket Truck	350	3	300	10
Boom/Crane Truck	350	3	300	10
R/T Crane (M)	215	3	300	10
Sock Line Puller	300	2	80	10
Bull Wheel Puller	350	2	160	10
Static Truck/Tensioner	350	2	300	10
Spacing Cart	10	4	80	10
Backhoe/Front Loader	125	2	60	8
D8 Cat	350	1	60	8
Sag Cat w/ 2 Winches	350	1	60	10
Hughes 500 E Helicopter	420	2	240	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
R/T Crane (M)	215	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

**Table 65**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install/Transfer Conductor**

Sock Line Puller	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Bull Wheel Puller	350	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Static Truck/Tensioner	350	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Spacing Cart	10	0.012	0.062	0.074	0.000	0.003	0.003	10.098	0.001	0.000	Other Construction Equipment
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
D8 Cat	350	0.218	0.790	1.742	0.003	0.067	0.061	258.997	0.020	0.007	Crawler Tractors
Sag Cat w/ 2 Winches	350	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Hughes 500 E Helicopter	420	1.765	2.199	1.421	1.485	0.044	0.044	782.418	0.022	0.025	See note b

a From Table 111

b All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>  
PM2.5 emissions assumed equal to PM10

SOx emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO2/lbS]

Fuel use = 112.3 kg/hr from Guidance on the Determination of Helicopter Emissions

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

CO2 emissions [lb/hr] = CO2 emission factor [kg/gal] x 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]

CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from

<http://www.theclimateregistry.org/downloads/2013/01/2013-Climat-Registry-Default-Emissions-Factors.pdf>

CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

Fuel use = 112.3 kg/hr from Guidance on the Determination of Helicopter Emissions

Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Manlift/Bucket Truck	2.85	12.29	33.21	0.06	0.99	0.91	6379.95	0.26	0.17	6,436.6
Boom/Crane Truck	3.97	13.28	32.13	0.05	1.16	1.07	5398.19	0.36	0.14	5,449.2
R/T Crane (M)	2.62	7.89	22.57	0.04	0.78	0.71	3361.74	0.24	0.09	3,393.8
Sock Line Puller	2.48	9.73	20.80	0.05	0.70	0.64	5080.20	0.22	0.13	5,125.8
Bull Wheel Puller	2.48	9.73	20.80	0.05	0.70	0.64	5080.20	0.22	0.13	5,125.8
Static Truck/Tensioner	2.48	9.73	20.80	0.05	0.70	0.64	5080.20	0.22	0.13	5,125.8
Spacing Cart	0.47	2.47	2.94	0.01	0.12	0.11	403.93	0.04	0.01	408.1
Backhoe/Front Loader	1.26	9.35	8.91	0.02	0.47	0.43	1620.73	0.11	0.04	1,636.2
D8 Cat	1.74	6.32	13.93	0.02	0.53	0.49	2071.97	0.16	0.05	2,092.0
Sag Cat w/ 2 Winches	1.24	4.86	10.40	0.02	0.35	0.32	2540.10	0.11	0.07	2,562.9
Hughes 500 E Helicopter	24.72	30.78	19.90	20.79	0.62	0.62	10953.86	0.30	0.35	11,068.2
<b>Total</b>	<b>46.32</b>	<b>116.44</b>	<b>206.41</b>	<b>21.16</b>	<b>7.11</b>	<b>6.59</b>	<b>47971.08</b>	<b>2.25</b>	<b>1.31</b>	<b>48424.31</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Manlift/Bucket Truck	0.43	1.84	4.98	0.01	0.15	0.14	956.99	0.04	0.02	965.5
Boom/Crane Truck	0.60	1.99	4.82	0.01	0.17	0.16	809.73	0.05	0.02	817.4
R/T Crane (M)	0.39	1.18	3.39	0.01	0.12	0.11	504.26	0.04	0.01	509.1

**Table 65**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install/Transfer Conductor**

Sock Line Puller	0.10	0.39	0.83	0.00	0.03	0.03	203.21	0.01	0.01	205.0
Bull Wheel Puller	0.20	0.78	1.66	0.00	0.06	0.05	406.42	0.02	0.01	410.1
Static Truck/Tensioner	0.37	1.46	3.12	0.01	0.10	0.10	762.03	0.03	0.02	768.9
Spacing Cart	0.02	0.10	0.12	0.00	0.00	0.00	16.16	0.00	0.00	16.3
Backhoe/Front Loader	0.04	0.28	0.27	0.00	0.01	0.01	48.62	0.00	0.00	49.1
D8 Cat	0.05	0.19	0.42	0.00	0.02	0.01	62.16	0.00	0.00	62.8
Sag Cat w/ 2 Winches	0.04	0.15	0.31	0.00	0.01	0.01	76.20	0.00	0.00	76.9
Hughes 500 E Helicopter	2.97	3.69	2.39	2.50	0.07	0.07	1314.46	0.04	0.04	1,328.2
<b>Total</b>	<b>5.20</b>	<b>12.06</b>	<b>22.31</b>	<b>2.53</b>	<b>0.75</b>	<b>0.69</b>	<b>5160.24</b>	<b>0.24</b>	<b>0.14</b>	<b>5209.14</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	3	300	N/A	27
1-Ton Truck, 4x4	6	300	N/A	27
Manlift/Bucket Truck	3	300	N/A	27
Boom/Crane Truck	3	300	N/A	27
Dump Truck	2	300	N/A	27
Wire Truck/Trailer	3	206	N/A	27
Static Truck/Tensioner	2	300	N/A	2
Splicing Rig	2	80	N/A	2
Splicing Lab	2	80	N/A	2
Lowboy Truck/Trailer	3	300	N/A	2
Fuel, Helicopter Support Truck	2	240	N/A	27
Worker Commute	165	300	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Wire Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Static Truck/Tensioner	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Splicing Rig	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

**Table 65**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install/Transfer Conductor**

Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Fuel, Helicopter Support Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.64	0.09	0.00	0.01	0.00	93.51	0.01	0.00	94.83
1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Manlift/Bucket Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Boom/Crane Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Dump Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Wire Truck/Trailer	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Static Truck/Tensioner	0.00	0.01	0.07	0.00	0.00	0.00	14.16	0.00	0.00	14.31
Splicing Rig	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	3.03
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.00	0.00	3.03
Lowboy Truck/Trailer	0.00	0.02	0.10	0.00	0.00	0.00	21.24	0.00	0.00	21.47
Fuel, Helicopter Support Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	1.68	48.07	5.24	0.08	0.99	0.04	6670.84	0.41	0.22	6746.98
<b>Offsite Total</b>	<b>1.86</b>	<b>49.80</b>	<b>11.50</b>	<b>0.10</b>	<b>1.22</b>	<b>0.16</b>	<b>8169.69</b>	<b>0.42</b>	<b>0.27</b>	<b>8262.31</b>
<b>Total</b>	<b>1.86</b>	<b>49.80</b>	<b>11.50</b>	<b>0.10</b>	<b>1.22</b>	<b>0.16</b>	<b>8169.69</b>	<b>0.42</b>	<b>0.27</b>	<b>8262.31</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.10	0.01	0.00	0.00	0.00	14.03	0.00	0.00	14.22
1-Ton Truck, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	18.20	0.00	0.00	18.41
Manlift/Bucket Truck	0.01	0.03	0.20	0.00	0.01	0.00	43.01	0.00	0.00	43.47
Boom/Crane Truck	0.01	0.03	0.20	0.00	0.01	0.00	43.01	0.00	0.00	43.47
Dump Truck	0.00	0.02	0.13	0.00	0.00	0.00	28.68	0.00	0.00	28.98
Wire Truck/Trailer	0.00	0.02	0.14	0.00	0.00	0.00	29.54	0.00	0.00	29.85
Static Truck/Tensioner	0.00	0.00	0.01	0.00	0.00	0.00	2.12	0.00	0.00	2.15
Splicing Rig	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.12
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.12
Lowboy Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	3.19	0.00	0.00	3.22
Fuel, Helicopter Support Truck	0.00	0.02	0.11	0.00	0.00	0.00	22.94	0.00	0.00	23.19

**Table 65**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install/Transfer Conductor**

Worker Commute	0.25	7.21	0.79	0.01	0.15	0.01	1000.63	0.06	0.03	1012.05
<b>Offsite Total</b>	<b>0.28</b>	<b>7.45</b>	<b>1.63</b>	<b>0.01</b>	<b>0.18</b>	<b>0.02</b>	<b>1205.58</b>	<b>0.06</b>	<b>0.04</b>	<b>1219.26</b>
<b>Total</b>	<b>0.28</b>	<b>7.45</b>	<b>1.63</b>	<b>0.01</b>	<b>0.18</b>	<b>0.02</b>	<b>1205.58</b>	<b>0.06</b>	<b>0.04</b>	<b>1219.26</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	3	Unpaved	17	300	0.474	0.047	24.16	2.42	3.62	0.36
3/4-Ton Truck, 4x4	3	Paved	10	300	0.003	0.001	0.10	0.02	0.01	0.00
1-Ton Truck, 4x4	6	Unpaved	17	300	0.564	0.056	57.48	5.75	8.62	0.86
1-Ton Truck, 4x4	6	Paved	10	300	0.003	0.001	0.20	0.05	0.03	0.01
Manlift/Bucket Truck	3	Unpaved	17	300	0.977	0.098	49.85	4.98	7.48	0.75
Manlift/Bucket Truck	3	Paved	10	300	0.003	0.001	0.10	0.02	0.01	0.00
Boom/Crane Truck	3	Unpaved	17	300	0.977	0.098	49.85	4.98	7.48	0.75
Boom/Crane Truck	3	Paved	10	300	0.003	0.001	0.10	0.02	0.01	0.00
Dump Truck	2	Unpaved	17	300	0.977	0.098	33.23	3.32	4.98	0.50
Dump Truck	2	Paved	10	300	0.003	0.001	0.07	0.02	0.01	0.00
Wire Truck/Trailer	3	Unpaved	17	206	0.977	0.098	49.85	4.98	5.13	0.51
Wire Truck/Trailer	3	Paved	10	206	0.003	0.001	0.10	0.02	0.01	0.00
Static Truck/Tensioner	2	Unpaved	2	300	0.977	0.098	3.91	0.39	0.59	0.06
Static Truck/Tensioner	2	Paved	0	300	0.003	0.001	0.00	0.00	0.00	0.00
Splicing Rig	2	Unpaved	2	80	0.564	0.056	2.25	0.23	0.09	0.01
Splicing Rig	2	Paved	0	80	0.003	0.001	0.00	0.00	0.00	0.00
Splicing Lab	2	Unpaved	2	80	0.564	0.056	2.25	0.23	0.09	0.01
Splicing Lab	2	Paved	0	80	0.003	0.001	0.00	0.00	0.00	0.00
Lowboy Truck/Trailer	3	Unpaved	2	300	0.977	0.098	5.86	0.59	0.88	0.09
Lowboy Truck/Trailer	3	Paved	0	300	0.003	0.001	0.00	0.00	0.00	0.00
Fuel, Helicopter Support Truck	2	Unpaved	17	240	0.977	0.098	33.23	3.32	3.99	0.40
Fuel, Helicopter Support Truck	2	Paved	10	240	0.003	0.001	0.07	0.02	0.01	0.00
Worker Commute	165	Paved	58	300	0.003	0.001	31.87	7.82	4.78	1.17
<b>Offsite Total</b>							<b>344.53</b>	<b>39.19</b>	<b>47.84</b>	<b>5.49</b>
<b>Total</b>							<b>344.53</b>	<b>39.19</b>	<b>47.84</b>	<b>5.49</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 65**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install/Transfer Conductor**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 66**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Shoo-fly Pole Removal**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	4.51	18.17	41.94	0.07	1.60	1.47	7,403.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>4.51</b>	<b>18.17</b>	<b>41.94</b>	<b>0.07</b>	<b>1.60</b>	<b>1.47</b>	<b>7403.0</b>
Offsite Motor Vehicle Exhaust	0.16	2.38	3.83	0.01	0.16	0.07	1,059.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	153.58	15.57	
<b>Offsite Total</b>	<b>0.16</b>	<b>2.38</b>	<b>3.83</b>	<b>0.01</b>	<b>153.74</b>	<b>15.64</b>	<b>1059.1</b>
<b>Total</b>	<b>4.66</b>	<b>20.56</b>	<b>45.77</b>	<b>0.08</b>	<b>155.34</b>	<b>17.12</b>	<b>8462.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.05	0.10	0.00	0.00	0.00	18.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.10</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>18.5</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.38	0.04	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.38</b>	<b>0.04</b>	<b>2.6</b>
<b>Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.11</b>	<b>0.00</b>	<b>0.39</b>	<b>0.04</b>	<b>21.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	60	2	5	6
Manlift/Bucket Truck	250	2	5	10
Boom/Crane Truck	350	2	5	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	60	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Manlift/Bucket Truck	250	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	0.76	3.78	4.81	0.01	0.40	0.37	562.90	0.07	0.01	568.9
Manlift/Bucket Truck	1.90	8.19	22.14	0.04	0.66	0.61	4253.30	0.17	0.11	4,291.1
Boom/Crane Truck	1.85	6.20	14.99	0.02	0.54	0.50	2519.15	0.17	0.07	2,543.0



**Table 66**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Shoo-fly Pole Removal**

<b>Total</b>	<b>4.51</b>	<b>18.17</b>	<b>41.94</b>	<b>0.07</b>	<b>1.60</b>	<b>1.47</b>	<b>7335.35</b>	<b>0.41</b>	<b>0.19</b>	<b>7402.95</b>
--------------	-------------	--------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.00	0.01	0.01	0.00	0.00	0.00	1.41	0.00	0.00	1.4
Manlift/Bucket Truck	0.00	0.02	0.06	0.00	0.00	0.00	10.63	0.00	0.00	10.7
Boom/Crane Truck	0.00	0.02	0.04	0.00	0.00	0.00	6.30	0.00	0.00	6.4
<b>Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.10</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>18.34</b>	<b>0.00</b>	<b>0.00</b>	<b>18.51</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	5	N/A	27
Water Truck	2	5	N/A	27
Manlift/Bucket Truck	2	5	N/A	27
Boom/Crane Truck	2	5	N/A	27
Flat Bed Truck/Trailer	2	5	N/A	27
Worker Commute	6	5	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 66**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Shoo-fly Pole Removal**

Onsite Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Manlift/Bucket Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Boom/Crane Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Flat Bed Truck/Trailer	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.16</b>	<b>2.38</b>	<b>3.83</b>	<b>0.01</b>	<b>0.16</b>	<b>0.07</b>	<b>1047.71</b>	<b>0.02</b>	<b>0.04</b>	<b>1059.13</b>
<b>Total</b>	<b>0.16</b>	<b>2.38</b>	<b>3.83</b>	<b>0.01</b>	<b>0.16</b>	<b>0.07</b>	<b>1047.71</b>	<b>0.02</b>	<b>0.04</b>	<b>1059.13</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.10
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Manlift/Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Flat Bed Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.62</b>	<b>0.00</b>	<b>0.00</b>	<b>2.65</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.62</b>	<b>0.00</b>	<b>0.00</b>	<b>2.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	2	Unpaved	17	5	0.564	0.056	19.16	1.92	0.05	0.00
1-Ton Truck, 4x4	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	2	Unpaved	17	5	0.977	0.098	33.23	3.32	0.08	0.01
Water Truck	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Manlift/Bucket Truck	2	Unpaved	17	5	0.977	0.098	33.23	3.32	0.08	0.01
Manlift/Bucket Truck	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Boom/Crane Truck	2	Unpaved	17	5	0.977	0.098	33.23	3.32	0.08	0.01

**Table 66**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Shoo-fly Pole Removal**

Boom/Crane Truck	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Flat Bed Truck/Trailer	2	Unpaved	17	5	0.977	0.098	33.23	3.32	0.08	0.01
Flat Bed Truck/Trailer	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	6	Paved	58	5	0.003	0.001	1.16	0.28	0.00	0.00
<b>Offsite Total</b>							<b>153.58</b>	<b>15.57</b>	<b>0.38</b>	<b>0.04</b>
<b>Total</b>							<b>153.58</b>	<b>15.57</b>	<b>0.38</b>	<b>0.04</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 67**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Remove Shoo-fly Conductor & GW**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	10.82	43.16	108.64	0.21	3.45	3.17	21,631.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>10.82</b>	<b>43.16</b>	<b>108.64</b>	<b>0.21</b>	<b>3.45</b>	<b>3.17</b>	<b>21631.8</b>
Offsite Motor Vehicle Exhaust	0.57	10.08	11.86	0.04	0.55	0.21	3,627.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	481.89	49.13	
<b>Offsite Total</b>	<b>0.57</b>	<b>10.08</b>	<b>11.86</b>	<b>0.04</b>	<b>482.44</b>	<b>49.34</b>	<b>3627.2</b>
<b>Total</b>	<b>11.40</b>	<b>53.24</b>	<b>120.50</b>	<b>0.25</b>	<b>485.89</b>	<b>52.51</b>	<b>25259.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.05	0.20	0.51	0.00	0.02	0.01	100.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.05</b>	<b>0.20</b>	<b>0.51</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>100.5</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.06	0.00	0.00	0.00	17.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2.33	0.24	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.06</b>	<b>0.00</b>	<b>2.33</b>	<b>0.24</b>	<b>17.7</b>
<b>Total</b>	<b>0.05</b>	<b>0.25</b>	<b>0.57</b>	<b>0.00</b>	<b>2.35</b>	<b>0.25</b>	<b>118.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Manlift/Bucket Truck	250	6	10	10
Boom/Crane Truck	350	4	10	5
Bull Wheel Puller	500	2	7	5
Hydraulic Rewind Puller	300	2	7	5

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Manlift/Bucket Truck	250	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Bull Wheel Puller	500	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Hydraulic Rewind Puller	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Manlift/Bucket Truck	5.69	24.58	66.42	0.13	1.97	1.82	12759.90	0.51	0.33	12,873.3

**Table 67**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Remove Shoo-fly Conductor & GW**

Boom/Crane Truck	2.65	8.86	21.42	0.04	0.77	0.71	3598.79	0.24	0.09	3,632.8
Bull Wheel Puller	1.24	4.86	10.40	0.02	0.35	0.32	2540.10	0.11	0.07	2,562.9
Hydraulic Rewind Puller	1.24	4.86	10.40	0.02	0.35	0.32	2540.10	0.11	0.07	2,562.9
<b>Total</b>	<b>10.82</b>	<b>43.16</b>	<b>108.64</b>	<b>0.21</b>	<b>3.45</b>	<b>3.17</b>	<b>21438.89</b>	<b>0.98</b>	<b>0.56</b>	<b>21631.82</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Manlift/Bucket Truck	0.03	0.12	0.33	0.00	0.01	0.01	63.80	0.00	0.00	64.4
Boom/Crane Truck	0.01	0.04	0.11	0.00	0.00	0.00	17.99	0.00	0.00	18.2
Bull Wheel Puller	0.00	0.02	0.04	0.00	0.00	0.00	8.89	0.00	0.00	9.0
Hydraulic Rewind Puller	0.00	0.02	0.04	0.00	0.00	0.00	8.89	0.00	0.00	9.0
<b>Total</b>	<b>0.05</b>	<b>0.20</b>	<b>0.51</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>99.57</b>	<b>0.00</b>	<b>0.00</b>	<b>100.47</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	8	10	N/A	27
Manlift/Bucket Truck	6	10	N/A	27
Sleeving Truck	4	10	N/A	27
Boom/Crane Truck	4	10	N/A	27
Truck, Semi Tractor	2	5	N/A	27
Water Truck	2	10	N/A	27
Lowboy Truck/Trailer	6	10	N/A	27
Worker Commute	28	10	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Sleeving Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Truck, Semi Tractor	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 67**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Remove Shoo-fly Conductor & GW**

Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05
----------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.01	0.08	0.24	0.00	0.03	0.01	161.75	0.00	0.01	163.67
Manlift/Bucket Truck	0.07	0.46	2.68	0.01	0.09	0.05	573.52	0.00	0.02	579.65
Sleeving Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Boom/Crane Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Truck, Semi Tractor	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Lowboy Truck/Trailer	0.07	0.46	2.68	0.01	0.09	0.05	573.52	0.00	0.02	579.65
Worker Commute	0.28	8.16	0.89	0.01	0.17	0.01	1132.02	0.07	0.04	1144.94
<b>Offsite Total</b>	<b>0.57</b>	<b>10.08</b>	<b>11.86</b>	<b>0.04</b>	<b>0.55</b>	<b>0.21</b>	<b>3587.86</b>	<b>0.08</b>	<b>0.12</b>	<b>3627.21</b>
<b>Total</b>	<b>0.57</b>	<b>10.08</b>	<b>11.86</b>	<b>0.04</b>	<b>0.55</b>	<b>0.21</b>	<b>3587.86</b>	<b>0.08</b>	<b>0.12</b>	<b>3627.21</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.82
Manlift/Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.87	0.00	0.00	2.90
Sleeving Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.91	0.00	0.00	1.93
Boom/Crane Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.91	0.00	0.00	1.93
Truck, Semi Tractor	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.48
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.97
Lowboy Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	2.87	0.00	0.00	2.90
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.46</b>	<b>0.00</b>	<b>0.00</b>	<b>17.65</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.46</b>	<b>0.00</b>	<b>0.00</b>	<b>17.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 67**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Remove Shoo-fly Conductor & GW**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	8	Unpaved	17	10	0.564	0.056	76.64	7.66	0.38	0.04
1-Ton Truck, 4x4	8	Paved	10	10	0.003	0.001	0.27	0.07	0.00	0.00
Manlift/Bucket Truck	6	Unpaved	17	10	0.977	0.098	99.70	9.97	0.50	0.05
Manlift/Bucket Truck	6	Paved	10	10	0.003	0.001	0.20	0.05	0.00	0.00
Sleeving Truck	4	Unpaved	17	10	0.977	0.098	66.46	6.65	0.33	0.03
Sleeving Truck	4	Paved	10	10	0.003	0.001	0.13	0.03	0.00	0.00
Boom/Crane Truck	4	Unpaved	17	10	0.977	0.098	66.46	6.65	0.33	0.03
Boom/Crane Truck	4	Paved	10	10	0.003	0.001	0.13	0.03	0.00	0.00
Truck, Semi Tractor	2	Unpaved	17	5	0.977	0.098	33.23	3.32	0.08	0.01
Truck, Semi Tractor	2	Paved	10	5	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	2	Unpaved	17	10	0.977	0.098	33.23	3.32	0.17	0.02
Water Truck	2	Paved	10	10	0.003	0.001	0.07	0.02	0.00	0.00
Lowboy Truck/Trailer	6	Unpaved	17	10	0.977	0.098	99.70	9.97	0.50	0.05
Lowboy Truck/Trailer	6	Paved	10	10	0.003	0.001	0.20	0.05	0.00	0.00
Worker Commute	28	Paved	58	10	0.003	0.001	5.41	1.33	0.03	0.01
<b>Offsite Total</b>							<b>481.89</b>	<b>49.13</b>	<b>2.33</b>	<b>0.24</b>
<b>Total</b>							<b>481.89</b>	<b>49.13</b>	<b>2.33</b>	<b>0.24</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

Table 68

Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Guard Structure Removal

Daily Emissions Summary

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	10.72	43.55	87.42	0.14	4.09	3.76	14,211.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>10.72</b>	<b>43.55</b>	<b>87.42</b>	<b>0.14</b>	<b>4.09</b>	<b>3.76</b>	<b>14211.6</b>
Offsite Motor Vehicle Exhaust	0.52	12.23	5.85	0.03	0.36	0.09	2,605.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	445.92	45.43	
<b>Offsite Total</b>	<b>0.52</b>	<b>12.23</b>	<b>5.85</b>	<b>0.03</b>	<b>446.28</b>	<b>45.52</b>	<b>2605.5</b>
<b>Total</b>	<b>11.24</b>	<b>55.78</b>	<b>93.27</b>	<b>0.17</b>	<b>450.36</b>	<b>49.28</b>	<b>16817.1</b>

Total Emissions Summary

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.27	1.09	2.19	0.00	0.10	0.09	355.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.27</b>	<b>1.09</b>	<b>2.19</b>	<b>0.00</b>	<b>0.10</b>	<b>0.09</b>	<b>355.3</b>
Offsite Motor Vehicle Exhaust	0.01	0.31	0.15	0.00	0.01	0.00	65.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	11.15	1.14	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.31</b>	<b>0.15</b>	<b>0.00</b>	<b>11.16</b>	<b>1.14</b>	<b>65.1</b>
<b>Total</b>	<b>0.28</b>	<b>1.39</b>	<b>2.33</b>	<b>0.00</b>	<b>11.26</b>	<b>1.23</b>	<b>420.4</b>

Construction Equipment Summary

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	8	50	7
Manlift/Bucket Truck	350	4	50	5
Boom/Crane Truck	500	4	50	10

Construction Equipment Exhaust Emission Factors

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	500	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

Construction Equipment Daily Exhaust Emissions

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	3.53	17.64	22.44	0.03	1.88	1.73	2626.85	0.32	0.07	2,654.9
Manlift/Bucket Truck	1.90	8.19	22.14	0.04	0.66	0.61	4253.30	0.17	0.11	4,291.1
Boom/Crane Truck	5.29	17.71	42.84	0.07	1.55	1.42	7197.58	0.48	0.19	7,265.6



**Table 68**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Guard Structure Removal**

<b>Total</b>	<b>10.72</b>	<b>43.55</b>	<b>87.42</b>	<b>0.14</b>	<b>4.09</b>	<b>3.76</b>	<b>14077.73</b>	<b>0.97</b>	<b>0.37</b>	<b>14211.58</b>
--------------	--------------	--------------	--------------	-------------	-------------	-------------	-----------------	-------------	-------------	-----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.09	0.44	0.56	0.00	0.05	0.04	65.67	0.01	0.00	66.4
Manlift/Bucket Truck	0.05	0.20	0.55	0.00	0.02	0.02	106.33	0.00	0.00	107.3
Boom/Crane Truck	0.13	0.44	1.07	0.00	0.04	0.04	179.94	0.01	0.00	181.6
<b>Total</b>	<b>0.27</b>	<b>1.09</b>	<b>2.19</b>	<b>0.00</b>	<b>0.10</b>	<b>0.09</b>	<b>351.94</b>	<b>0.02</b>	<b>0.01</b>	<b>355.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	8	50	N/A	27
1-Ton Truck, 4x4	8	50	N/A	27
Water Truck	2	50	N/A	27
Manlift/Bucket Truck	4	50	N/A	27
Boom/Crane Truck	4	50	N/A	27
Extendable Flat Bed Pole Truck	8	50	N/A	27
Worker Commute	24	50	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										

**Table 68**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Guard Structure Removal**

None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88
1-Ton Truck, 4x4	0.06	1.69	0.25	0.00	0.02	0.00	249.37	0.02	0.01	252.88
Water Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Manlift/Bucket Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Boom/Crane Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Extendable Flat Bed Pole Truck	0.04	1.09	0.12	0.00	0.02	0.00	150.56	0.01	0.00	152.28
Worker Commute	0.24	6.99	0.76	0.01	0.14	0.01	970.30	0.06	0.03	981.38
<b>Offsite Total</b>	<b>0.52</b>	<b>12.23</b>	<b>5.85</b>	<b>0.03</b>	<b>0.36</b>	<b>0.09</b>	<b>2575.48</b>	<b>0.10</b>	<b>0.09</b>	<b>2605.50</b>
<b>Total</b>	<b>0.52</b>	<b>12.23</b>	<b>5.85</b>	<b>0.03</b>	<b>0.36</b>	<b>0.09</b>	<b>2575.48</b>	<b>0.10</b>	<b>0.09</b>	<b>2605.50</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	6.23	0.00	0.00	6.32
1-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	6.23	0.00	0.00	6.32
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.78	0.00	0.00	4.83
Manlift/Bucket Truck	0.00	0.01	0.04	0.00	0.00	0.00	9.56	0.00	0.00	9.66
Boom/Crane Truck	0.00	0.01	0.04	0.00	0.00	0.00	9.56	0.00	0.00	9.66
Extendable Flat Bed Pole Truck	0.00	0.03	0.00	0.00	0.00	0.00	3.76	0.00	0.00	3.81
Worker Commute	0.01	0.17	0.02	0.00	0.00	0.00	24.26	0.00	0.00	24.53
<b>Offsite Total</b>	<b>0.01</b>	<b>0.31</b>	<b>0.15</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>64.39</b>	<b>0.00</b>	<b>0.00</b>	<b>65.14</b>
<b>Total</b>	<b>0.01</b>	<b>0.31</b>	<b>0.15</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>64.39</b>	<b>0.00</b>	<b>0.00</b>	<b>65.14</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	8	Unpaved	17	50	0.474	0.047	64.43	6.44	1.61	0.16
3/4-Ton Truck, 4x4	8	Paved	10	50	0.003	0.001	0.27	0.07	0.01	0.00
1-Ton Truck, 4x4	8	Unpaved	17	50	0.564	0.056	76.64	7.66	1.92	0.19
1-Ton Truck, 4x4	8	Paved	10	50	0.003	0.001	0.27	0.07	0.01	0.00

**Table 68**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Guard Structure Removal**

Water Truck	2	Unpaved	17	50	0.977	0.098	33.23	3.32	0.83	0.08
Water Truck	2	Paved	10	50	0.003	0.001	0.07	0.02	0.00	0.00
Manlift/Bucket Truck	4	Unpaved	17	50	0.977	0.098	66.46	6.65	1.66	0.17
Manlift/Bucket Truck	4	Paved	10	50	0.003	0.001	0.13	0.03	0.00	0.00
Boom/Crane Truck	4	Unpaved	17	50	0.977	0.098	66.46	6.65	1.66	0.17
Boom/Crane Truck	4	Paved	10	50	0.003	0.001	0.13	0.03	0.00	0.00
Extendable Flat Bed Pole Truck	8	Unpaved	17	50	0.977	0.098	132.93	13.29	3.32	0.33
Extendable Flat Bed Pole Truck	8	Paved	10	50	0.003	0.001	0.27	0.07	0.01	0.00
Worker Commute	24	Paved	58	50	0.003	0.001	4.63	1.14	0.12	0.03
<b>Offsite Total</b>							<b>445.92</b>	<b>45.43</b>	<b>11.15</b>	<b>1.14</b>
<b>Total</b>							<b>445.92</b>	<b>45.43</b>	<b>11.15</b>	<b>1.14</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

Table 69

Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
115 kV Pole Removal

Daily Emissions Summary

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.13	8.39	19.43	0.03	0.74	0.68	3,406.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.13</b>	<b>8.39</b>	<b>19.43</b>	<b>0.03</b>	<b>0.74</b>	<b>0.68</b>	<b>3406.6</b>
Offsite Motor Vehicle Exhaust	0.09	2.06	1.16	0.01	0.08	0.02	498.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	70.33	7.23	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.06</b>	<b>1.16</b>	<b>0.01</b>	<b>70.41</b>	<b>7.25</b>	<b>498.5</b>
<b>Total</b>	<b>2.22</b>	<b>10.45</b>	<b>20.59</b>	<b>0.04</b>	<b>71.15</b>	<b>7.93</b>	<b>3905.1</b>

Total Emissions Summary

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.08	0.17	0.00	0.01	0.01	30.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.08</b>	<b>0.17</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>30.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	4.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.63	0.07	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.63</b>	<b>0.07</b>	<b>4.5</b>
<b>Total</b>	<b>0.02</b>	<b>0.09</b>	<b>0.19</b>	<b>0.00</b>	<b>0.64</b>	<b>0.07</b>	<b>35.1</b>

Construction Equipment Summary

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	1	18	5
Manlift/Bucket Truck	250	1	18	8
Boom/Crane Truck	350	1	18	8

Construction Equipment Exhaust Emission Factors

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Manlift/Bucket Truck	250	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

Construction Equipment Daily Exhaust Emissions

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	0.31	1.58	2.00	0.00	0.17	0.15	234.54	0.03	0.01	237.0
Manlift/Bucket Truck	0.76	3.28	8.86	0.02	0.26	0.24	1701.32	0.07	0.04	1,716.4
Boom/Crane Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1

**Table 69**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**115 kV Pole Removal**

<b>Total</b>	<b>2.13</b>	<b>8.39</b>	<b>19.43</b>	<b>0.03</b>	<b>0.74</b>	<b>0.68</b>	<b>3375.38</b>	<b>0.19</b>	<b>0.09</b>	<b>3406.60</b>
--------------	-------------	-------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.00	0.01	0.02	0.00	0.00	0.00	2.11	0.00	0.00	2.1
Manlift/Bucket Truck	0.01	0.03	0.08	0.00	0.00	0.00	15.31	0.00	0.00	15.4
Boom/Crane Truck	0.01	0.03	0.08	0.00	0.00	0.00	12.96	0.00	0.00	13.1
<b>Total</b>	<b>0.02</b>	<b>0.08</b>	<b>0.17</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>30.38</b>	<b>0.00</b>	<b>0.00</b>	<b>30.66</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	18	N/A	27
Manlift/Bucket Truck	1	18	N/A	27
Boom/Crane Truck	1	18	N/A	27
Flat Bed Pole Truck	1	18	N/A	27
Worker Commute	6	18	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92

**Table 69**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**115 kV Pole Removal**

Manlift/Bucket Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Boom/Crane Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Pole Truck	0.00	0.14	0.01	0.00	0.00	0.00	18.82	0.00	0.00	19.04
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.09</b>	<b>2.06</b>	<b>1.16</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>493.01</b>	<b>0.02</b>	<b>0.02</b>	<b>498.51</b>
<b>Total</b>	<b>0.09</b>	<b>2.06</b>	<b>1.16</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>493.01</b>	<b>0.02</b>	<b>0.02</b>	<b>498.51</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.37
Manlift/Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.87
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.87
Flat Bed Pole Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.17
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.18	0.00	0.00	2.21
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.44</b>	<b>0.00</b>	<b>0.00</b>	<b>4.49</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.44</b>	<b>0.00</b>	<b>0.00</b>	<b>4.49</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	2	Unpaved	17	18	0.564	0.056	19.16	1.92	0.17	0.02
1-Ton Truck, 4x4	2	Paved	10	18	0.003	0.001	0.07	0.02	0.00	0.00
Manlift/Bucket Truck	1	Unpaved	17	18	0.977	0.098	16.62	1.66	0.15	0.01
Manlift/Bucket Truck	1	Paved	10	18	0.003	0.001	0.03	0.01	0.00	0.00
Boom/Crane Truck	1	Unpaved	17	18	0.977	0.098	16.62	1.66	0.15	0.01
Boom/Crane Truck	1	Paved	10	18	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Pole Truck	1	Unpaved	17	18	0.977	0.098	16.62	1.66	0.15	0.01
Flat Bed Pole Truck	1	Paved	10	18	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	6	Paved	58	18	0.003	0.001	1.16	0.28	0.01	0.00
<b>Offsite Total</b>							<b>70.33</b>	<b>7.23</b>	<b>0.63</b>	<b>0.07</b>
<b>Total</b>							<b>70.33</b>	<b>7.23</b>	<b>0.63</b>	<b>0.07</b>

a From Table 112

**Table 69**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**115 kV Pole Removal**

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 70**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install TSP Riser Foundations**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.98	12.14	21.65	0.06	0.72	0.66	6,140.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.15	0.02	
<b>Onsite Total</b>	<b>2.98</b>	<b>12.14</b>	<b>21.65</b>	<b>0.06</b>	<b>0.86</b>	<b>0.68</b>	<b>6140.3</b>
Offsite Motor Vehicle Exhaust	0.58	7.08	17.62	0.04	0.64	0.31	4,288.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	361.21	36.81	
<b>Offsite Total</b>	<b>0.58</b>	<b>7.08</b>	<b>17.62</b>	<b>0.04</b>	<b>361.85</b>	<b>37.12</b>	<b>4288.8</b>
<b>Total</b>	<b>3.57</b>	<b>19.21</b>	<b>39.26</b>	<b>0.11</b>	<b>362.72</b>	<b>37.81</b>	<b>10429.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.07	0.26	0.49	0.00	0.02	0.02	130.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.07</b>	<b>0.26</b>	<b>0.49</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>130.0</b>
Offsite Motor Vehicle Exhaust	0.01	0.16	0.33	0.00	0.01	0.01	82.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.02	0.72	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.33</b>	<b>0.00</b>	<b>7.03</b>	<b>0.72</b>	<b>82.3</b>
<b>Total</b>	<b>0.08</b>	<b>0.42</b>	<b>0.82</b>	<b>0.00</b>	<b>7.05</b>	<b>0.74</b>	<b>212.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	1	50	7
Backhoe/Front Loader	200	1	50	10
Auger Truck	500	1	35	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes
Auger Truck	500	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	0.93	3.10	7.50	0.01	0.27	0.25	1259.58	0.08	0.03	1,271.5
Backhoe/Front Loader	1.02	3.53	7.90	0.02	0.26	0.24	1715.83	0.09	0.04	1,731.6



**Table 70**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Install TSP Riser Foundations**

Auger Truck	1.03	5.51	6.25	0.03	0.19	0.17	3110.29	0.09	0.08	3,137.2
<b>Total</b>	<b>2.98</b>	<b>12.14</b>	<b>21.65</b>	<b>0.06</b>	<b>0.72</b>	<b>0.66</b>	<b>6085.70</b>	<b>0.27</b>	<b>0.16</b>	<b>6140.29</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.02	0.08	0.19	0.00	0.01	0.01	31.49	0.00	0.00	31.8
Backhoe/Front Loader	0.03	0.09	0.20	0.00	0.01	0.01	42.90	0.00	0.00	43.3
Auger Truck	0.02	0.10	0.11	0.00	0.00	0.00	54.43	0.00	0.00	54.9
<b>Total</b>	<b>0.07</b>	<b>0.26</b>	<b>0.49</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>128.82</b>	<b>0.01</b>	<b>0.00</b>	<b>129.98</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	3	50	N/A	27
Boom/Crane Truck	1	50	N/A	27
Auger Truck	1	35	N/A	27
Water Truck	1	50	N/A	27
Dump Truck	2	50	N/A	27
Concrete Mixer Truck	15	35	N/A	60
Worker Commute	12	50	N/A	58

<sup>a</sup> Concrete mixer trucks based 1 TSP/day, on 148 CY/TSP and 10 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Table 70**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install TSP Riser Foundations**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.64	0.09	0.00	0.01	0.00	93.51	0.01	0.00	94.83
Boom/Crane Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Auger Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Dump Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Concrete Mixer Truck	0.38	2.56	14.91	0.03	0.49	0.27	3186.23	0.02	0.11	3220.27
Worker Commute	0.12	3.50	0.38	0.01	0.07	0.00	485.15	0.03	0.02	490.69
<b>Offsite Total</b>	<b>0.58</b>	<b>7.08</b>	<b>17.62</b>	<b>0.04</b>	<b>0.64</b>	<b>0.31</b>	<b>4242.83</b>	<b>0.06</b>	<b>0.14</b>	<b>4288.83</b>
<b>Total</b>	<b>0.58</b>	<b>7.08</b>	<b>17.62</b>	<b>0.04</b>	<b>0.64</b>	<b>0.31</b>	<b>4242.83</b>	<b>0.06</b>	<b>0.14</b>	<b>4288.83</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	2.34	0.00	0.00	2.37
Boom/Crane Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.39	0.00	0.00	2.42
Auger Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.67	0.00	0.00	1.69
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.39	0.00	0.00	2.42
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.78	0.00	0.00	4.83
Concrete Mixer Truck	0.01	0.04	0.26	0.00	0.01	0.00	55.76	0.00	0.00	56.35
Worker Commute	0.00	0.09	0.01	0.00	0.00	0.00	12.13	0.00	0.00	12.27
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.33</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>81.46</b>	<b>0.00</b>	<b>0.00</b>	<b>82.34</b>
<b>Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.33</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>81.46</b>	<b>0.00</b>	<b>0.00</b>	<b>82.34</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 70**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install TSP Riser Foundations**

<b>Offsite</b>										
3/4-Ton Truck, 4x4	3	Unpaved	17	50	0.474	0.047	24.16	2.42	0.60	0.06
3/4-Ton Truck, 4x4	3	Paved	10	50	0.003	0.001	0.10	0.02	0.00	0.00
Boom/Crane Truck	1	Unpaved	17	50	0.977	0.098	16.62	1.66	0.42	0.04
Boom/Crane Truck	1	Paved	10	50	0.003	0.001	0.03	0.01	0.00	0.00
Auger Truck	1	Unpaved	17	35	0.977	0.098	16.62	1.66	0.29	0.03
Auger Truck	1	Paved	10	35	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	17	50	0.977	0.098	16.62	1.66	0.42	0.04
Water Truck	1	Paved	10	50	0.003	0.001	0.03	0.01	0.00	0.00
Dump Truck	2	Unpaved	17	50	0.977	0.098	33.23	3.32	0.83	0.08
Dump Truck	2	Paved	10	50	0.003	0.001	0.07	0.02	0.00	0.00
Concrete Mixer Truck	15	Unpaved	17	35	0.977	0.098	249.24	24.92	4.36	0.44
Concrete Mixer Truck	15	Paved	43	35	0.003	0.001	2.15	0.53	0.04	0.01
Worker Commute	12	Paved	58	50	0.003	0.001	2.32	0.57	0.06	0.01
<b>Offsite Total</b>							<b>361.21</b>	<b>36.81</b>	<b>7.02</b>	<b>0.72</b>
<b>Total</b>							<b>361.21</b>	<b>36.81</b>	<b>7.02</b>	<b>0.72</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling <sup>d</sup>	CY	148	1770	1.00E-03	1.52E-04	0.15	0.02	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.15</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Daily based on 1 TSP, 13 ft. diameter x 30 ft. deep; total based on 12 TSPs

**Table 71**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Riser Haul**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.06	3.54	8.57	0.01	0.31	0.28	1,453.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.06</b>	<b>3.54</b>	<b>8.57</b>	<b>0.01</b>	<b>0.31</b>	<b>0.28</b>	<b>1453.1</b>
Offsite Motor Vehicle Exhaust	0.10	1.90	1.98	0.01	0.09	0.03	613.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	83.54	8.50	
<b>Offsite Total</b>	<b>0.10</b>	<b>1.90</b>	<b>1.98</b>	<b>0.01</b>	<b>83.63</b>	<b>8.53</b>	<b>613.2</b>
<b>Total</b>	<b>1.16</b>	<b>5.44</b>	<b>10.55</b>	<b>0.02</b>	<b>83.94</b>	<b>8.81</b>	<b>2066.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	5.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.8</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.33	0.03	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.33</b>	<b>0.03</b>	<b>2.5</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.34</b>	<b>0.04</b>	<b>8.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	1	8	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
<b>Total</b>	<b>1.06</b>	<b>3.54</b>	<b>8.57</b>	<b>0.01</b>	<b>0.31</b>	<b>0.28</b>	<b>1439.52</b>	<b>0.10</b>	<b>0.04</b>	<b>1453.12</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 71**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Riser Haul**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.00	0.01	0.03	0.00	0.00	0.00	5.76	0.00	0.00	5.8
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.76</b>	<b>0.00</b>	<b>0.00</b>	<b>5.81</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	2	8	N/A	27
Water Truck	1	8	N/A	27
Boom/Crane Truck	1	8	N/A	27
Flat Bed Pole Truck	2	8	N/A	27
Worker Commute	4	8	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Pole Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.42	0.06	0.00	0.01	0.00	62.34	0.00	0.00	63.22
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Boom/Crane Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Pole Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.10</b>	<b>1.90</b>	<b>1.98</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>606.41</b>	<b>0.02</b>	<b>0.02</b>	<b>613.21</b>

**Table 71**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Riser Haul**

<b>Total</b>	<b>0.10</b>	<b>1.90</b>	<b>1.98</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>606.41</b>	<b>0.02</b>	<b>0.02</b>	<b>613.21</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	---------------	-------------	-------------	---------------

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.39
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.39
Flat Bed Pole Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.77
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.65
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.43</b>	<b>0.00</b>	<b>0.00</b>	<b>2.45</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.43</b>	<b>0.00</b>	<b>0.00</b>	<b>2.45</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	2	Unpaved	17	8	0.474	0.047	16.11	1.61	0.06	0.01
3/4-Ton Truck, 4x4	2	Paved	10	8	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	1	Unpaved	17	8	0.977	0.098	16.62	1.66	0.07	0.01
Water Truck	1	Paved	10	8	0.003	0.001	0.03	0.01	0.00	0.00
Boom/Crane Truck	1	Unpaved	17	8	0.977	0.098	16.62	1.66	0.07	0.01
Boom/Crane Truck	1	Paved	10	8	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Pole Truck	2	Unpaved	17	8	0.977	0.098	33.23	3.32	0.13	0.01
Flat Bed Pole Truck	2	Paved	10	8	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	8	0.003	0.001	0.77	0.19	0.00	0.00
<b>Offsite Total</b>							<b>83.54</b>	<b>8.50</b>	<b>0.33</b>	<b>0.03</b>
<b>Total</b>							<b>83.54</b>	<b>8.50</b>	<b>0.33</b>	<b>0.03</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 71**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Riser Haul**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 72**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Riser Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.91	14.97	29.71	0.05	1.42	1.30	4,667.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4667.8</b>
Offsite Motor Vehicle Exhaust	0.29	6.88	2.73	0.02	0.21	0.05	1,434.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	176.27	18.21	
<b>Offsite Total</b>	<b>0.29</b>	<b>6.88</b>	<b>2.73</b>	<b>0.02</b>	<b>176.48</b>	<b>18.26</b>	<b>1434.9</b>
<b>Total</b>	<b>4.20</b>	<b>21.85</b>	<b>32.43</b>	<b>0.06</b>	<b>177.90</b>	<b>19.56</b>	<b>6102.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.05	0.19	0.37	0.00	0.02	0.02	58.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.05</b>	<b>0.19</b>	<b>0.37</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>58.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.09	0.03	0.00	0.00	0.00	17.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2.20	0.23	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.03</b>	<b>0.00</b>	<b>2.21</b>	<b>0.23</b>	<b>17.9</b>
<b>Total</b>	<b>0.05</b>	<b>0.27</b>	<b>0.41</b>	<b>0.00</b>	<b>2.22</b>	<b>0.24</b>	<b>76.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	3	25	6
Boom/Crane Truck	350	3	25	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------



**Table 72**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Riser Assembly**

Compressor Trailer	1.13	5.67	7.21	0.01	0.60	0.56	844.35	0.10	0.02	853.4
Boom/Crane Truck	2.78	9.30	22.49	0.04	0.81	0.75	3778.73	0.25	0.10	3,814.4
<b>Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4623.08</b>	<b>0.35</b>	<b>0.12</b>	<b>4667.80</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
Compressor Trailer	0.01	0.07	0.09	0.00	0.01	0.01	10.55	0.00	0.00	10.7
Boom/Crane Truck	0.03	0.12	0.28	0.00	0.01	0.01	47.23	0.00	0.00	47.7
<b>Total</b>	<b>0.05</b>	<b>0.19</b>	<b>0.37</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>57.79</b>	<b>0.00</b>	<b>0.00</b>	<b>58.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	25	N/A	27
1-Ton Truck, 4x4	6	25	N/A	27
Water Truck	1	25	N/A	27
Boom/Crane Truck	3	25	N/A	27
Worker Commute	18	25	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO <sub>2</sub> (lb/mi) <sup>a</sup>	CH <sub>4</sub> (lb/mi) <sup>a</sup>	N <sub>2</sub> O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

**Table 72**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Riser Assembly**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.05	1.27	0.19	0.00	0.02	0.00	187.03	0.01	0.01	189.66
1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Boom/Crane Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.29</b>	<b>6.88</b>	<b>2.73</b>	<b>0.02</b>	<b>0.21</b>	<b>0.05</b>	<b>1418.42</b>	<b>0.06</b>	<b>0.05</b>	<b>1434.88</b>
<b>Total</b>	<b>0.29</b>	<b>6.88</b>	<b>2.73</b>	<b>0.02</b>	<b>0.21</b>	<b>0.05</b>	<b>1418.42</b>	<b>0.06</b>	<b>0.05</b>	<b>1434.88</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	2.34	0.00	0.00	2.37
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.52	0.00	0.00	1.53
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.19	0.00	0.00	1.21
Boom/Crane Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.58	0.00	0.00	3.62
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.10	0.00	0.00	9.20
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.73</b>	<b>0.00</b>	<b>0.00</b>	<b>17.94</b>
<b>Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.73</b>	<b>0.00</b>	<b>0.00</b>	<b>17.94</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 72**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Riser Assembly**

3/4-Ton Truck, 4x4	6	Unpaved	17	25	0.474	0.047	48.32	4.83	0.60	0.06
3/4-Ton Truck, 4x4	6	Paved	10	25	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Truck, 4x4	6	Unpaved	17	25	0.564	0.056	57.48	5.75	0.72	0.07
1-Ton Truck, 4x4	6	Paved	10	25	0.003	0.001	0.20	0.05	0.00	0.00
Water Truck	1	Unpaved	17	25	0.977	0.098	16.62	1.66	0.21	0.02
Water Truck	1	Paved	10	25	0.003	0.001	0.03	0.01	0.00	0.00
Boom/Crane Truck	3	Unpaved	17	25	0.977	0.098	49.85	4.98	0.62	0.06
Boom/Crane Truck	3	Paved	10	25	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	18	Paved	58	25	0.003	0.001	3.48	0.85	0.04	0.01
<b>Offsite Total</b>							<b>176.27</b>	<b>18.21</b>	<b>2.20</b>	<b>0.23</b>
<b>Total</b>							<b>176.27</b>	<b>18.21</b>	<b>2.20</b>	<b>0.23</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 73**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Riser Erection**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.91	14.97	29.71	0.05	1.42	1.30	4,667.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4667.8</b>
Offsite Motor Vehicle Exhaust	0.25	6.65	1.39	0.01	0.16	0.02	1,145.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	126.33	13.20	
<b>Offsite Total</b>	<b>0.25</b>	<b>6.65</b>	<b>1.39</b>	<b>0.01</b>	<b>126.49</b>	<b>13.22</b>	<b>1145.1</b>
<b>Total</b>	<b>4.16</b>	<b>21.62</b>	<b>31.09</b>	<b>0.06</b>	<b>127.91</b>	<b>14.53</b>	<b>5812.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.05	0.19	0.37	0.00	0.02	0.02	58.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.05</b>	<b>0.19</b>	<b>0.37</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>58.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.02	0.00	0.00	0.00	14.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.58	0.17	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>0.00</b>	<b>1.58</b>	<b>0.17</b>	<b>14.3</b>
<b>Total</b>	<b>0.05</b>	<b>0.27</b>	<b>0.39</b>	<b>0.00</b>	<b>1.60</b>	<b>0.18</b>	<b>72.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	3	25	6
R/T Crane (L)	350	3	25	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
R/T Crane (L)	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 73  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
TSP Riser Erection**

Compressor Trailer	1.13	5.67	7.21	0.01	0.60	0.56	844.35	0.10	0.02	853.4
R/T Crane (L)	2.78	9.30	22.49	0.04	0.81	0.75	3778.73	0.25	0.10	3,814.4
<b>Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4623.08</b>	<b>0.35</b>	<b>0.12</b>	<b>4667.80</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.01	0.07	0.09	0.00	0.01	0.01	10.55	0.00	0.00	10.7
R/T Crane (L)	0.03	0.12	0.28	0.00	0.01	0.01	47.23	0.00	0.00	47.7
<b>Total</b>	<b>0.05</b>	<b>0.19</b>	<b>0.37</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>57.79</b>	<b>0.00</b>	<b>0.00</b>	<b>58.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	25	N/A	27
1-Ton Truck, 4x4	6	25	N/A	27
Water Truck	1	25	N/A	27
Worker Commute	18	25	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
---------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 73**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Riser Erection**

<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.05	1.27	0.19	0.00	0.02	0.00	187.03	0.01	0.01	189.66
1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.25</b>	<b>6.65</b>	<b>1.39</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>1131.66</b>	<b>0.06</b>	<b>0.04</b>	<b>1145.05</b>
<b>Total</b>	<b>0.25</b>	<b>6.65</b>	<b>1.39</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>1131.66</b>	<b>0.06</b>	<b>0.04</b>	<b>1145.05</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

<b>Vehicle</b>	<b>VOC (tons)<sup>a</sup></b>	<b>CO (tons)<sup>a</sup></b>	<b>NOX (tons)<sup>a</sup></b>	<b>SOX (tons)<sup>a</sup></b>	<b>PM10 (tons)<sup>a</sup></b>	<b>PM2.5 (tons)<sup>a</sup></b>	<b>CO2 (tons)<sup>a</sup></b>	<b>CH4 (tons)<sup>a</sup></b>	<b>N2O (tons)<sup>a</sup></b>	<b>CO2e (tons)<sup>b</sup></b>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	2.34	0.00	0.00	2.37
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.52	0.00	0.00	1.53
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.19	0.00	0.00	1.21
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.10	0.00	0.00	9.20
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.15</b>	<b>0.00</b>	<b>0.00</b>	<b>14.31</b>
<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.15</b>	<b>0.00</b>	<b>0.00</b>	<b>14.31</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

<b>Vehicle</b>	<b>Number</b>	<b>Road Type</b>	<b>Miles/Day/Vehicle</b>	<b>Days Used</b>	<b>PM10 Emission Factor (lb/mi)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/mi)<sup>a</sup></b>	<b>PM10 Emissions (lb/day)<sup>b</sup></b>	<b>PM2.5 Emissions (lb/day)<sup>b</sup></b>	<b>PM10 Emissions (tons)<sup>c</sup></b>	<b>PM2.5 Emissions (tons)<sup>c</sup></b>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	6	Unpaved	17	25	0.474	0.047	48.32	4.83	0.60	0.06
3/4-Ton Truck, 4x4	6	Paved	10	25	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Truck, 4x4	6	Unpaved	17	25	0.564	0.056	57.48	5.75	0.72	0.07
1-Ton Truck, 4x4	6	Paved	10	25	0.003	0.001	0.20	0.05	0.00	0.00

**Table 73**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**TSP Riser Erection**

Water Truck	1	Unpaved	17	25	0.977	0.098	16.62	1.66	0.21	0.02
Water Truck	1	Paved	10	25	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	18	Paved	58	25	0.003	0.001	3.48	0.85	0.04	0.01
<b>Offsite Total</b>							<b>126.33</b>	<b>13.20</b>	<b>1.58</b>	<b>0.17</b>
<b>Total</b>							<b>126.33</b>	<b>13.20</b>	<b>1.58</b>	<b>0.17</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 74**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Vault Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.29	10.15	17.45	0.03	0.69	0.63	3,209.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.10	0.02	
<b>Onsite Total</b>	<b>2.29</b>	<b>10.15</b>	<b>17.45</b>	<b>0.03</b>	<b>0.79</b>	<b>0.65</b>	<b>3209.7</b>
Offsite Motor Vehicle Exhaust	0.24	3.40	6.43	0.02	0.26	0.12	1,688.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	187.59	19.09	
<b>Offsite Total</b>	<b>0.24</b>	<b>3.40</b>	<b>6.43</b>	<b>0.02</b>	<b>187.85</b>	<b>19.21</b>	<b>1688.4</b>
<b>Total</b>	<b>2.53</b>	<b>13.55</b>	<b>23.87</b>	<b>0.05</b>	<b>188.64</b>	<b>19.85</b>	<b>4898.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.03	0.17	0.26	0.00	0.01	0.01	48.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.03</b>	<b>0.17</b>	<b>0.26</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>48.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.06	0.08	0.00	0.00	0.00	23.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2.68	0.27	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.08</b>	<b>0.00</b>	<b>2.68</b>	<b>0.28</b>	<b>23.0</b>
<b>Total</b>	<b>0.04</b>	<b>0.23</b>	<b>0.34</b>	<b>0.00</b>	<b>2.69</b>	<b>0.29</b>	<b>71.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	125	1	42	8
Excavator	250	1	26	7
Crane (L)	500	1	26	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Excavator	250	0.105	0.339	0.785	0.002	0.026	0.024	158.540	0.009	0.004	Excavators
Crane (L)	500	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.63	4.68	4.45	0.01	0.23	0.22	810.37	0.06	0.02	818.1
Excavator	0.74	2.37	5.50	0.01	0.18	0.17	1109.78	0.07	0.03	1,120.1



**Table 74**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM Vault Installation**

Crane (L)	0.93	3.10	7.50	0.01	0.27	0.25	1259.58	0.08	0.03	1,271.5
<b>Total</b>	<b>2.29</b>	<b>10.15</b>	<b>17.45</b>	<b>0.03</b>	<b>0.69</b>	<b>0.63</b>	<b>3179.73</b>	<b>0.21</b>	<b>0.08</b>	<b>3209.71</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.01	0.10	0.09	0.00	0.00	0.00	17.02	0.00	0.00	17.2
Excavator	0.01	0.03	0.07	0.00	0.00	0.00	14.43	0.00	0.00	14.6
Crane (L)	0.01	0.04	0.10	0.00	0.00	0.00	16.37	0.00	0.00	16.5
<b>Total</b>	<b>0.03</b>	<b>0.17</b>	<b>0.26</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>47.82</b>	<b>0.00</b>	<b>0.00</b>	<b>48.27</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	42	N/A	27
Dump Truck	2	42	N/A	27
Water Truck	1	42	N/A	27
Concrete Mixer Truck	3	13	N/A	60
Lowboy Truck/Trailer	1	26	N/A	27
Flat Bed Truck/Trailer	3	26	N/A	27
Worker Commute	8	42	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

**Table 74**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Vault Installation**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92
Dump Truck	0.02	0.15	0.89	0.00	0.03	0.02	191.17	0.00	0.01	193.22
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Concrete Mixer Truck	0.08	0.51	2.98	0.01	0.10	0.05	637.25	0.00	0.02	644.05
Lowboy Truck/Trailer	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Truck/Trailer	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.24</b>	<b>3.40</b>	<b>6.43</b>	<b>0.02</b>	<b>0.26</b>	<b>0.12</b>	<b>1670.23</b>	<b>0.03</b>	<b>0.06</b>	<b>1688.36</b>
<b>Total</b>	<b>0.24</b>	<b>3.40</b>	<b>6.43</b>	<b>0.02</b>	<b>0.26</b>	<b>0.12</b>	<b>1670.23</b>	<b>0.03</b>	<b>0.06</b>	<b>1688.36</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.86
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.01	0.00	0.00	4.06
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.01	0.00	0.00	2.03
Concrete Mixer Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.14	0.00	0.00	4.19
Lowboy Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	1.24	0.00	0.00	1.26
Flat Bed Truck/Trailer	0.00	0.00	0.02	0.00	0.00	0.00	3.73	0.00	0.00	3.77
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.79	0.00	0.00	6.87
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.78</b>	<b>0.00</b>	<b>0.00</b>	<b>23.03</b>
<b>Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.78</b>	<b>0.00</b>	<b>0.00</b>	<b>23.03</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 74**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Vault Installation**

1-Ton Truck, 4x4	2	Unpaved	17	42	0.564	0.056	19.16	1.92	0.40	0.04
1-Ton Truck, 4x4	2	Paved	10	42	0.003	0.001	0.07	0.02	0.00	0.00
Dump Truck	2	Unpaved	17	42	0.977	0.098	33.23	3.32	0.70	0.07
Dump Truck	2	Paved	10	42	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	1	Unpaved	17	42	0.977	0.098	16.62	1.66	0.35	0.03
Water Truck	1	Paved	10	42	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Mixer Truck	3	Unpaved	17	13	0.977	0.098	49.85	4.98	0.32	0.03
Concrete Mixer Truck	3	Paved	43	13	0.003	0.001	0.43	0.11	0.00	0.00
Lowboy Truck/Trailer	1	Unpaved	17	26	0.977	0.098	16.62	1.66	0.22	0.02
Lowboy Truck/Trailer	1	Paved	10	26	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Truck/Trailer	3	Unpaved	17	26	0.977	0.098	49.85	4.98	0.65	0.06
Flat Bed Truck/Trailer	3	Paved	10	26	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	8	Paved	58	42	0.003	0.001	1.54	0.38	0.03	0.01
<b>Offsite Total</b>							<b>187.59</b>	<b>19.09</b>	<b>2.68</b>	<b>0.27</b>
<b>Total</b>							<b>187.59</b>	<b>19.09</b>	<b>2.68</b>	<b>0.27</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	99	1386	1.00E-03	1.52E-04	0.10	0.02	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.10</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Daily based on 1 vault/day, 11 ft.-2 in. x 21 ft.-4 in. x 11 ft.-2 in.; total based on 14 vaults

**Table 75  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Duct Bank Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.87	5.67	5.90	0.01	0.37	0.34	952.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.07	0.01	
<b>Onsite Total</b>	<b>0.87</b>	<b>5.67</b>	<b>5.90</b>	<b>0.01</b>	<b>0.45</b>	<b>0.35</b>	<b>952.9</b>
Offsite Motor Vehicle Exhaust	0.26	3.56	7.32	0.02	0.29	0.13	1,881.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	220.89	22.43	
<b>Offsite Total</b>	<b>0.26</b>	<b>3.56</b>	<b>7.32</b>	<b>0.02</b>	<b>221.18</b>	<b>22.56</b>	<b>1881.6</b>
<b>Total</b>	<b>1.13</b>	<b>9.22</b>	<b>13.22</b>	<b>0.03</b>	<b>221.62</b>	<b>22.92</b>	<b>2834.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.10	0.10	0.00	0.01	0.01	16.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.10</b>	<b>0.10</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>16.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.06	0.09	0.00	0.00	0.00	23.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.07	0.31	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.09</b>	<b>0.00</b>	<b>3.07</b>	<b>0.31</b>	<b>23.9</b>
<b>Total</b>	<b>0.02</b>	<b>0.15</b>	<b>0.18</b>	<b>0.00</b>	<b>3.08</b>	<b>0.32</b>	<b>40.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	1	30	5
Backhoe/Front Loader	125	1	35	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	0.31	1.58	2.00	0.00	0.17	0.15	234.54	0.03	0.01	237.0
Backhoe/Front Loader	0.55	4.09	3.90	0.01	0.20	0.19	709.07	0.05	0.02	715.9
<b>Total</b>	<b>0.87</b>	<b>5.67</b>	<b>5.90</b>	<b>0.01</b>	<b>0.37</b>	<b>0.34</b>	<b>943.61</b>	<b>0.08</b>	<b>0.02</b>	<b>952.90</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

**Table 75  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Duct Bank Installation**

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.00	0.02	0.03	0.00	0.00	0.00	3.52	0.00	0.00	3.6
Backhoe/Front Loader	0.01	0.07	0.07	0.00	0.00	0.00	12.41	0.00	0.00	12.5
<b>Total</b>	<b>0.01</b>	<b>0.10</b>	<b>0.10</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>15.93</b>	<b>0.00</b>	<b>0.00</b>	<b>16.08</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	35	N/A	27
Dump Truck	3	30	N/A	27
Water Truck	1	35	N/A	27
Concrete Mixer Truck	3	10	N/A	60
Lowboy Truck/Trailer	1	35	N/A	27
Flat Bed Truck/Trailer	3	35	N/A	27
Pipe Truck/Trailer	1	30	N/A	27
Worker Commute	8	35	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Pipe Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
---------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 75**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Duct Bank Installation**

<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92
Dump Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Concrete Mixer Truck	0.08	0.51	2.98	0.01	0.10	0.05	637.25	0.00	0.02	644.05
Lowboy Truck/Trailer	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Truck/Trailer	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Pipe Truck/Trailer	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.26</b>	<b>3.56</b>	<b>7.32</b>	<b>0.02</b>	<b>0.29</b>	<b>0.13</b>	<b>1861.40</b>	<b>0.03</b>	<b>0.06</b>	<b>1881.57</b>
<b>Total</b>	<b>0.26</b>	<b>3.56</b>	<b>7.32</b>	<b>0.02</b>	<b>0.29</b>	<b>0.13</b>	<b>1861.40</b>	<b>0.03</b>	<b>0.06</b>	<b>1881.57</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

<b>Vehicle</b>	<b>VOC (tons)<sup>a</sup></b>	<b>CO (tons)<sup>a</sup></b>	<b>NOX (tons)<sup>a</sup></b>	<b>SOX (tons)<sup>a</sup></b>	<b>PM10 (tons)<sup>a</sup></b>	<b>PM2.5 (tons)<sup>a</sup></b>	<b>CO2 (tons)<sup>a</sup></b>	<b>CH4 (tons)<sup>a</sup></b>	<b>N2O (tons)<sup>a</sup></b>	<b>CO2e (tons)<sup>b</sup></b>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.72
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.30	0.00	0.00	4.35
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.67	0.00	0.00	1.69
Concrete Mixer Truck	0.00	0.00	0.01	0.00	0.00	0.00	3.19	0.00	0.00	3.22
Lowboy Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	1.67	0.00	0.00	1.69
Flat Bed Truck/Trailer	0.00	0.00	0.02	0.00	0.00	0.00	5.02	0.00	0.00	5.07
Pipe Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	1.43	0.00	0.00	1.45
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.65</b>	<b>0.00</b>	<b>0.00</b>	<b>23.91</b>
<b>Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.65</b>	<b>0.00</b>	<b>0.00</b>	<b>23.91</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

<b>Vehicle</b>	<b>Number</b>	<b>Road Type</b>	<b>Miles/ Day/ Vehicle</b>	<b>Days Used</b>	<b>PM10 Emission Factor (lb/mi)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/mi)<sup>a</sup></b>	<b>PM10 Emissions (lb/day)<sup>b</sup></b>	<b>PM2.5 Emissions (lb/day)<sup>b</sup></b>	<b>PM10 Emissions (tons)<sup>c</sup></b>	<b>PM2.5 Emissions (tons)<sup>c</sup></b>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 75**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Duct Bank Installation**

1-Ton Truck, 4x4	2	Unpaved	17	35	0.564	0.056	19.16	1.92	0.34	0.03
1-Ton Truck, 4x4	2	Paved	10	35	0.003	0.001	0.07	0.02	0.00	0.00
Dump Truck	3	Unpaved	17	30	0.977	0.098	49.85	4.98	0.75	0.07
Dump Truck	3	Paved	10	30	0.003	0.001	0.10	0.02	0.00	0.00
Water Truck	1	Unpaved	17	35	0.977	0.098	16.62	1.66	0.29	0.03
Water Truck	1	Paved	10	35	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Mixer Truck	3	Unpaved	17	10	0.977	0.098	49.85	4.98	0.25	0.02
Concrete Mixer Truck	3	Paved	43	10	0.003	0.001	0.43	0.11	0.00	0.00
Lowboy Truck/Trailer	1	Unpaved	17	35	0.977	0.098	16.62	1.66	0.29	0.03
Lowboy Truck/Trailer	1	Paved	10	35	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Truck/Trailer	3	Unpaved	17	35	0.977	0.098	49.85	4.98	0.87	0.09
Flat Bed Truck/Trailer	3	Paved	10	35	0.003	0.001	0.10	0.02	0.00	0.00
Pipe Truck/Trailer	1	Unpaved	17	30	0.977	0.098	16.62	1.66	0.25	0.02
Pipe Truck/Trailer	1	Paved	10	30	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	8	Paved	58	35	0.003	0.001	1.54	0.38	0.03	0.01
<b>Offsite Total</b>							<b>220.89</b>	<b>22.43</b>	<b>3.07</b>	<b>0.31</b>
<b>Total</b>							<b>220.89</b>	<b>22.43</b>	<b>3.07</b>	<b>0.31</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	74	2593	1.00E-03	1.52E-04	0.07	0.01	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.07</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Based on 24 in. x 60 in. x 7,000 ft. over 35 days

Table 76

Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Install Underground Cable

Daily Emissions Summary

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	4.07	16.16	40.04	0.08	1.28	1.18	8,125.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>4.07</b>	<b>16.16</b>	<b>40.04</b>	<b>0.08</b>	<b>1.28</b>	<b>1.18</b>	<b>8125.4</b>
Offsite Motor Vehicle Exhaust	0.21	3.20	5.23	0.01	0.22	0.09	1,430.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	203.91	20.68	
<b>Offsite Total</b>	<b>0.21</b>	<b>3.20</b>	<b>5.23</b>	<b>0.01</b>	<b>204.13</b>	<b>20.77</b>	<b>1430.7</b>
<b>Total</b>	<b>4.28</b>	<b>19.35</b>	<b>45.27</b>	<b>0.09</b>	<b>205.41</b>	<b>21.95</b>	<b>9556.2</b>

Total Emissions Summary

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.06	0.25	0.61	0.00	0.02	0.02	128.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.06</b>	<b>0.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>128.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.08	0.00	0.00	0.00	23.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.25	0.33	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.08</b>	<b>0.00</b>	<b>3.26</b>	<b>0.33</b>	<b>23.2</b>
<b>Total</b>	<b>0.06</b>	<b>0.30</b>	<b>0.69</b>	<b>0.00</b>	<b>3.27</b>	<b>0.35</b>	<b>152.1</b>

Construction Equipment Summary

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Manlift/Bucket Truck	250	4	35	5
Boom/Crane Truck	350	1	7	7
Puller	350	2	35	5

Construction Equipment Exhaust Emission Factors

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Manlift/Bucket Truck	250	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Puller	350	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment

a From Table 111

Construction Equipment Daily Exhaust Emissions

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Manlift/Bucket Truck	1.90	8.19	22.14	0.04	0.66	0.61	4253.30	0.17	0.11	4,291.1
Boom/Crane Truck	0.93	3.10	7.50	0.01	0.27	0.25	1259.58	0.08	0.03	1,271.5
Puller	1.24	4.86	10.40	0.02	0.35	0.32	2540.10	0.11	0.07	2,562.9



**Table 76**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install Underground Cable**

<b>Total</b>	<b>4.07</b>	<b>16.16</b>	<b>40.04</b>	<b>0.08</b>	<b>1.28</b>	<b>1.18</b>	<b>8052.98</b>	<b>0.37</b>	<b>0.21</b>	<b>8125.45</b>
--------------	-------------	--------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Manlift/Bucket Truck	0.03	0.14	0.39	0.00	0.01	0.01	74.43	0.00	0.00	75.1
Boom/Crane Truck	0.00	0.02	0.04	0.00	0.00	0.00	8.89	0.00	0.00	9.0
Puller	0.02	0.09	0.18	0.00	0.01	0.01	44.45	0.00	0.00	44.9
<b>Total</b>	<b>0.06</b>	<b>0.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>127.77</b>	<b>0.01</b>	<b>0.00</b>	<b>128.91</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	35	N/A	27
Manlift/Bucket Truck	4	35	N/A	27
Boom/Crane Truck	1	7	N/A	27
Water Truck	1	35	N/A	27
Pipe Truck/Trailer	1	30	N/A	27
Wire Truck/Trailer	1	30	N/A	27
Flat Bed Truck/Trailer	3	35	N/A	27
Worker Commute	8	35	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Pipe Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Wire Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

**Table 76**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install Underground Cable**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	40.44	0.00	0.00	40.92
Manlift/Bucket Truck	0.05	0.31	1.79	0.00	0.06	0.03	382.35	0.00	0.01	386.43
Boom/Crane Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Water Truck	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Pipe Truck/Trailer	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Wire Truck/Trailer	0.01	0.08	0.45	0.00	0.01	0.01	95.59	0.00	0.00	96.61
Flat Bed Truck/Trailer	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.21</b>	<b>3.20</b>	<b>5.23</b>	<b>0.01</b>	<b>0.22</b>	<b>0.09</b>	<b>1415.33</b>	<b>0.03</b>	<b>0.05</b>	<b>1430.73</b>
<b>Total</b>	<b>0.21</b>	<b>3.20</b>	<b>5.23</b>	<b>0.01</b>	<b>0.22</b>	<b>0.09</b>	<b>1415.33</b>	<b>0.03</b>	<b>0.05</b>	<b>1430.73</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.72
Manlift/Bucket Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.69	0.00	0.00	6.76
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.34
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.67	0.00	0.00	1.69
Pipe Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	1.43	0.00	0.00	1.45
Wire Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	1.43	0.00	0.00	1.45
Flat Bed Truck/Trailer	0.00	0.00	0.02	0.00	0.00	0.00	5.02	0.00	0.00	5.07
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.95</b>	<b>0.00</b>	<b>0.00</b>	<b>23.20</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.95</b>	<b>0.00</b>	<b>0.00</b>	<b>23.20</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 76**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Install Underground Cable**

Offsite										
1-Ton Truck, 4x4	2	Unpaved	17	35	0.564	0.056	19.16	1.92	0.34	0.03
1-Ton Truck, 4x4	2	Paved	10	35	0.003	0.001	0.07	0.02	0.00	0.00
Manlift/Bucket Truck	4	Unpaved	17	35	0.977	0.098	66.46	6.65	1.16	0.12
Manlift/Bucket Truck	4	Paved	10	35	0.003	0.001	0.13	0.03	0.00	0.00
Boom/Crane Truck	1	Unpaved	17	7	0.977	0.098	16.62	1.66	0.06	0.01
Boom/Crane Truck	1	Paved	10	7	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	17	35	0.977	0.098	16.62	1.66	0.29	0.03
Water Truck	1	Paved	10	35	0.003	0.001	0.03	0.01	0.00	0.00
Pipe Truck/Trailer	1	Unpaved	17	30	0.977	0.098	16.62	1.66	0.25	0.02
Pipe Truck/Trailer	1	Paved	10	30	0.003	0.001	0.03	0.01	0.00	0.00
Wire Truck/Trailer	1	Unpaved	17	30	0.977	0.098	16.62	1.66	0.25	0.02
Wire Truck/Trailer	1	Paved	10	30	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Truck/Trailer	3	Unpaved	17	35	0.977	0.098	49.85	4.98	0.87	0.09
Flat Bed Truck/Trailer	3	Paved	10	35	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	8	Paved	58	35	0.003	0.001	1.54	0.38	0.03	0.01
<b>Offsite Total</b>							<b>203.91</b>	<b>20.68</b>	<b>3.25</b>	<b>0.33</b>
<b>Total</b>							<b>203.91</b>	<b>20.68</b>	<b>3.25</b>	<b>0.33</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 77**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM Restoration**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	5.94	28.86	44.31	0.08	2.24	2.06	7,043.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	36.43	16.28	
<b>Onsite Total</b>	<b>5.94</b>	<b>28.86</b>	<b>44.31</b>	<b>0.08</b>	<b>38.66</b>	<b>18.34</b>	<b>7043.6</b>
Offsite Motor Vehicle Exhaust	0.26	6.42	2.24	0.01	0.20	0.04	1,282.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	114.61	12.09	
<b>Offsite Total</b>	<b>0.26</b>	<b>6.42</b>	<b>2.24</b>	<b>0.01</b>	<b>114.81</b>	<b>12.13</b>	<b>1282.0</b>
<b>Total</b>	<b>6.20</b>	<b>35.28</b>	<b>46.55</b>	<b>0.09</b>	<b>153.47</b>	<b>30.47</b>	<b>8325.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.17	1.01	1.16	0.00	0.08	0.08	162.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.27	0.57	
<b>Onsite Total</b>	<b>0.17</b>	<b>1.01</b>	<b>1.16</b>	<b>0.00</b>	<b>1.36</b>	<b>0.65</b>	<b>162.7</b>
Offsite Motor Vehicle Exhaust	0.01	0.22	0.08	0.00	0.01	0.00	44.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	4.01	0.42	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.22</b>	<b>0.08</b>	<b>0.00</b>	<b>4.02</b>	<b>0.42</b>	<b>44.9</b>
<b>Total</b>	<b>0.18</b>	<b>1.24</b>	<b>1.24</b>	<b>0.00</b>	<b>5.38</b>	<b>1.07</b>	<b>207.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	125	3	70	7
Motor Grader	250	3	70	7
Drum Type Compactor	100	3	70	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Motor Grader	250	0.125	0.393	1.043	0.002	0.036	0.033	171.959	0.011	0.004	Graders
Drum Type Compactor	100	0.079	0.397	0.511	0.001	0.042	0.038	58.936	0.007	0.002	Rollers

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	1.65	12.27	11.69	0.02	0.61	0.56	2127.21	0.15	0.06	2,147.6
Motor Grader	2.62	8.26	21.90	0.04	0.75	0.69	3611.13	0.24	0.09	3,645.2

**Table 77**

**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM Restoration**

Drum Type Compactor	1.67	8.33	10.72	0.01	0.87	0.80	1237.65	0.15	0.03	1,250.9
<b>Total</b>	<b>5.94</b>	<b>28.86</b>	<b>44.31</b>	<b>0.08</b>	<b>2.24</b>	<b>2.06</b>	<b>6976.00</b>	<b>0.54</b>	<b>0.18</b>	<b>7043.63</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.06	0.43	0.41	0.00	0.02	0.02	74.45	0.01	0.00	75.2
Motor Grader	0.06	0.29	0.38	0.00	0.03	0.03	43.32	0.01	0.00	43.8
Drum Type Compactor	0.06	0.29	0.38	0.00	0.03	0.03	43.32	0.01	0.00	43.8
<b>Total</b>	<b>0.17</b>	<b>1.01</b>	<b>1.16</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>161.09</b>	<b>0.02</b>	<b>0.00</b>	<b>162.73</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	6	70	N/A	27
Water Truck	3	70	N/A	27
Lowboy Truck/Trailer	3	70	N/A	1
Worker Commute	21	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 77  
Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM  
Restoration**

1-Ton Truck, 4x4	0.01	0.06	0.18	0.00	0.02	0.01	121.31	0.00	0.00	122.76
Water Truck	0.03	0.23	1.34	0.00	0.04	0.02	286.76	0.00	0.01	289.82
Lowboy Truck/Trailer	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.21	6.12	0.67	0.01	0.13	0.00	849.02	0.05	0.03	858.71
<b>Offsite Total</b>	<b>0.26</b>	<b>6.42</b>	<b>2.24</b>	<b>0.01</b>	<b>0.20</b>	<b>0.04</b>	<b>1267.71</b>	<b>0.05</b>	<b>0.04</b>	<b>1282.02</b>
<b>Total</b>	<b>0.26</b>	<b>6.42</b>	<b>2.24</b>	<b>0.01</b>	<b>0.20</b>	<b>0.04</b>	<b>1267.71</b>	<b>0.05</b>	<b>0.04</b>	<b>1282.02</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	4.25	0.00	0.00	4.30
Water Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.04	0.00	0.00	10.14
Lowboy Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
Worker Commute	0.01	0.21	0.02	0.00	0.00	0.00	29.72	0.00	0.00	30.05
<b>Offsite Total</b>	<b>0.01</b>	<b>0.22</b>	<b>0.08</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>44.37</b>	<b>0.00</b>	<b>0.00</b>	<b>44.87</b>
<b>Total</b>	<b>0.01</b>	<b>0.22</b>	<b>0.08</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>44.37</b>	<b>0.00</b>	<b>0.00</b>	<b>44.87</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	6	Unpaved	17	70	0.564	0.056	57.48	5.75	2.01	0.20
1-Ton Truck, 4x4	6	Paved	10	70	0.003	0.001	0.20	0.05	0.01	0.00
Water Truck	3	Unpaved	17	70	0.977	0.098	49.85	4.98	1.74	0.17
Water Truck	3	Paved	10	70	0.003	0.001	0.10	0.02	0.00	0.00
Lowboy Truck/Trailer	3	Unpaved	1	70	0.977	0.098	2.93	0.29	0.10	0.01
Lowboy Truck/Trailer	3	Paved	0	70	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	21	Paved	58	70	0.003	0.001	4.06	1.00	0.14	0.03
<b>Offsite Total</b>							<b>114.61</b>	<b>12.09</b>	<b>4.01</b>	<b>0.42</b>
<b>Total</b>							<b>114.61</b>	<b>12.09</b>	<b>4.01</b>	<b>0.42</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 77**  
**Transmission and Subtransmission Construction Emissions - Controlled Fugitive PM**  
**Restoration**

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr	21	1470	1.735	0.775	36.43	16.28	1.27	0.57
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>36.43</b>	<b>16.28</b>	<b>1.27</b>	<b>0.57</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 78**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**LADWP Corridor Underground Crossing (Segment 1) - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.05	1.25	0.61	0.00	0.04	0.01	274.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	10.95	1.22	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>10.99</b>	<b>1.23</b>	<b>274.4</b>
<b>Total</b>	<b>1.57</b>	<b>7.80</b>	<b>18.32</b>	<b>0.04</b>	<b>11.51</b>	<b>1.72</b>	<b>3707.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.10	0.27	0.00	0.01	0.01	51.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.10</b>	<b>0.27</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>51.5</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	4.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.16	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.16</b>	<b>0.02</b>	<b>4.1</b>
<b>Total</b>	<b>0.02</b>	<b>0.12</b>	<b>0.27</b>	<b>0.00</b>	<b>0.17</b>	<b>0.03</b>	<b>55.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	30	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>



**Table 78  
Telecommunications Construction Emissions - Controlled Fugitive PM  
LADWP Corridor Underground Crossing (Segment 1) - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.10	0.27	0.00	0.01	0.01	51.04	0.00	0.00	51.5
<b>Total</b>	<b>0.02</b>	<b>0.10</b>	<b>0.27</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>51.04</b>	<b>0.00</b>	<b>0.00</b>	<b>51.49</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	30	N/A	14
Bucket Truck	2	30	N/A	14
Worker Commute	4	30	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 78**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**LADWP Corridor Underground Crossing (Segment 1) - Install Cable**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
Bucket Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>271.33</b>	<b>0.01</b>	<b>0.01</b>	<b>274.36</b>
<b>Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>271.33</b>	<b>0.01</b>	<b>0.01</b>	<b>274.36</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.49	0.00	0.00	1.50
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.43	0.00	0.00	2.45
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.07</b>	<b>0.00</b>	<b>0.00</b>	<b>4.12</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.07</b>	<b>0.00</b>	<b>0.00</b>	<b>4.12</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	30	0.564	0.056	2.25	0.23	0.03	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	30	0.003	0.001	0.03	0.01	0.00	0.00
Bucket Truck	2	Unpaved	4	30	0.977	0.098	7.82	0.78	0.12	0.01
Bucket Truck	2	Paved	10	30	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	30	0.003	0.001	0.77	0.19	0.01	0.00
<b>Offsite Total</b>							<b>10.95</b>	<b>1.22</b>	<b>0.16</b>	<b>0.02</b>
<b>Total</b>							<b>10.95</b>	<b>1.22</b>	<b>0.16</b>	<b>0.02</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 78**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**LADWP Corridor Underground Crossing (Segment 1) - Install Cable**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 79**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**LADWP Corridor Underground Crossing (Segment 1) - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.18	0.16	0.00	0.03	0.00	184.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	5.35	0.66	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>5.38</b>	<b>0.66</b>	<b>184.8</b>
<b>Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>5.38</b>	<b>0.66</b>	<b>184.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 79**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**LADWP Corridor Underground Crossing (Segment 1) - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	2	N/A	14
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.01	0.03	0.00	0.00	0.00	20.97	0.00	0.00	21.22
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 79**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**LADWP Corridor Underground Crossing (Segment 1) - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>182.69</b>	<b>0.01</b>	<b>0.01</b>	<b>184.78</b>
<b>Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>182.69</b>	<b>0.01</b>	<b>0.01</b>	<b>184.78</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	4	2	0.564	0.056	4.51	0.45	0.00	0.00
Splicing Lab	2	Paved	10	2	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	4	0.003	0.001	0.77	0.19	0.00	0.00
<b>Offsite Total</b>							<b>5.35</b>	<b>0.66</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>5.35</b>	<b>0.66</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 79**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**LADWP Corridor Underground Crossing (Segment 1) - Splice Fiber Optic Cable**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 80**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**LADWP Corridor Underground Crossing (Segment 1) - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.03	0.00	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.24</b>	<b>0.20</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.68	1.42	0.01	0.07	0.02	490.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	13.22	1.50	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>13.29</b>	<b>1.53</b>	<b>490.4</b>
<b>Total</b>	<b>0.90</b>	<b>4.50</b>	<b>7.74</b>	<b>0.02</b>	<b>13.53</b>	<b>1.72</b>	<b>1875.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.02	0.03	0.00	0.00	0.00	7.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.6</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>2.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>10.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	11	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**



**Table 80**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**LADWP Corridor Underground Crossing (Segment 1) - Underground Conduit and Structures**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.02	0.03	0.00	0.00	0.00	7.55	0.00	0.00	7.6
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.55</b>	<b>0.00</b>	<b>0.00</b>	<b>7.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	11	N/A	14
1-Ton Crew Cab Flatbed, 4x4	1	11	N/A	14
Water Truck	1	11	N/A	14
Concrete Truck	1	11	N/A	60
Worker Commute	5	11	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
Water Truck	0.01	0.04	0.23	0.00	0.01	0.00	49.56	0.00	0.00	50.09
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68

**Table 80**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**LADWP Corridor Underground Crossing (Segment 1) - Underground Conduit and Structures**

Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>485.09</b>	<b>0.01</b>	<b>0.02</b>	<b>490.45</b>
<b>Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>485.09</b>	<b>0.01</b>	<b>0.02</b>	<b>490.45</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.06
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.06
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.28
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.17	0.00	0.00	1.18
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.11	0.00	0.00	1.12
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.67</b>	<b>0.00</b>	<b>0.00</b>	<b>2.70</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.67</b>	<b>0.00</b>	<b>0.00</b>	<b>2.70</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	4	11	0.474	0.047	1.89	0.19	0.01	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	11	0.564	0.056	2.25	0.23	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	4	11	0.977	0.098	3.91	0.39	0.02	0.00
Water Truck	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Truck	1	Unpaved	4	11	0.977	0.098	3.91	0.39	0.02	0.00
Concrete Truck	1	Paved	56	11	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	58	11	0.003	0.001	0.97	0.24	0.01	0.00
<b>Offsite Total</b>							<b>13.22</b>	<b>1.50</b>	<b>0.07</b>	<b>0.01</b>
<b>Total</b>							<b>13.22</b>	<b>1.50</b>	<b>0.07</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 80**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**LADWP Corridor Underground Crossing (Segment 1) - Underground Conduit and Structures**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling <sup>d</sup>	CY	28	311	1.00E-03	1.52E-04	0.03	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 2,800 ft. long x 1 ft. wide x 3 ft. deep over 11 days

Table 81

Telecommunications Construction Emissions - Controlled Fugitive PM  
OPGW Underground Crossing near Highway 47 (Segment 5) - Install Cable

Daily Emissions Summary

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.05	1.25	0.61	0.00	0.04	0.01	274.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	10.95	1.22	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>10.99</b>	<b>1.23</b>	<b>274.4</b>
<b>Total</b>	<b>1.57</b>	<b>7.80</b>	<b>18.32</b>	<b>0.04</b>	<b>11.51</b>	<b>1.72</b>	<b>3707.2</b>

Total Emissions Summary

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.05	0.13	0.00	0.00	0.00	25.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.13</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>25.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	2.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.08	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>2.1</b>
<b>Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.14</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>27.8</b>

Construction Equipment Summary

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	15	8

Construction Equipment Exhaust Emission Factors

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

Construction Equipment Daily Exhaust Emissions

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>

**Table 81  
Telecommunications Construction Emissions - Controlled Fugitive PM  
OPGW Underground Crossing near Highway 47 (Segment 5) - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.01	0.05	0.13	0.00	0.00	0.00	25.52	0.00	0.00	25.7
<b>Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.13</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>25.52</b>	<b>0.00</b>	<b>0.00</b>	<b>25.75</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	15	N/A	14
Bucket Truck	2	15	N/A	14
Worker Commute	4	15	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 81  
Telecommunications Construction Emissions - Controlled Fugitive PM  
OPGW Underground Crossing near Highway 47 (Segment 5) - Install Cable**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
Bucket Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>271.33</b>	<b>0.01</b>	<b>0.01</b>	<b>274.36</b>
<b>Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>271.33</b>	<b>0.01</b>	<b>0.01</b>	<b>274.36</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.08
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.75
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.21	0.00	0.00	1.23
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.03</b>	<b>0.00</b>	<b>0.00</b>	<b>2.06</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.03</b>	<b>0.00</b>	<b>0.00</b>	<b>2.06</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	15	0.564	0.056	2.25	0.23	0.02	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	15	0.003	0.001	0.03	0.01	0.00	0.00
Bucket Truck	2	Unpaved	4	15	0.977	0.098	7.82	0.78	0.06	0.01
Bucket Truck	2	Paved	10	15	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	15	0.003	0.001	0.77	0.19	0.01	0.00
<b>Offsite Total</b>							<b>10.95</b>	<b>1.22</b>	<b>0.08</b>	<b>0.01</b>
<b>Total</b>							<b>10.95</b>	<b>1.22</b>	<b>0.08</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 81**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Install Cable**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

Table 82

Telecommunications Construction Emissions - Controlled Fugitive PM  
OPGW Underground Crossing near Highway 47 (Segment 5) - Splice Fiber Optic Cable

Daily Emissions Summary

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.18	0.16	0.00	0.03	0.00	184.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	5.35	0.66	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>5.38</b>	<b>0.66</b>	<b>184.8</b>
<b>Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>5.38</b>	<b>0.66</b>	<b>184.8</b>

Total Emissions Summary

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>

Construction Equipment Summary

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

Construction Equipment Exhaust Emission Factors

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

Construction Equipment Daily Exhaust Emissions

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>



**Table 82**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	2	N/A	14
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.01	0.03	0.00	0.00	0.00	20.97	0.00	0.00	21.22
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 82**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>182.69</b>	<b>0.01</b>	<b>0.01</b>	<b>184.78</b>
<b>Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>182.69</b>	<b>0.01</b>	<b>0.01</b>	<b>184.78</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	4	2	0.564	0.056	4.51	0.45	0.00	0.00
Splicing Lab	2	Paved	10	2	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	4	0.003	0.001	0.77	0.19	0.00	0.00
<b>Offsite Total</b>							<b>5.35</b>	<b>0.66</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>5.35</b>	<b>0.66</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 82**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Splice Fiber Optic Cable**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 83**

**Telecommunications Construction Emissions - Controlled Fugitive PM  
OPGW Underground Crossing near Highway 47 (Segment 5) - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.02	0.00	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.22</b>	<b>0.19</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.68	1.42	0.01	0.07	0.02	490.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	13.22	1.50	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>13.29</b>	<b>1.53</b>	<b>490.4</b>
<b>Total</b>	<b>0.90</b>	<b>4.50</b>	<b>7.74</b>	<b>0.02</b>	<b>13.52</b>	<b>1.72</b>	<b>1875.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	4.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.8</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>1.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>6.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	7	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 83**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Underground Conduit and Structures**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.01	0.02	0.00	0.00	0.00	4.80	0.00	0.00	4.8
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.80</b>	<b>0.00</b>	<b>0.00</b>	<b>4.85</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	7	N/A	14
1-Ton Crew Cab Flatbed, 4x4	1	7	N/A	14
Water Truck	1	7	N/A	14
Concrete Truck	1	7	N/A	60
Worker Commute	5	7	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
Water Truck	0.01	0.04	0.23	0.00	0.01	0.00	49.56	0.00	0.00	50.09
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68

**Table 83**

**Telecommunications Construction Emissions - Controlled Fugitive PM  
OPGW Underground Crossing near Highway 47 (Segment 5) - Underground Conduit and Structures**

Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>485.09</b>	<b>0.01</b>	<b>0.02</b>	<b>490.45</b>
<b>Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>485.09</b>	<b>0.01</b>	<b>0.02</b>	<b>490.45</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.18
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.75
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.70</b>	<b>0.00</b>	<b>0.00</b>	<b>1.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.70</b>	<b>0.00</b>	<b>0.00</b>	<b>1.72</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	4	7	0.474	0.047	1.89	0.19	0.01	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	10	7	0.003	0.001	0.03	0.01	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	7	0.564	0.056	2.25	0.23	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	7	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	4	7	0.977	0.098	3.91	0.39	0.01	0.00
Water Truck	1	Paved	10	7	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Truck	1	Unpaved	4	7	0.977	0.098	3.91	0.39	0.01	0.00
Concrete Truck	1	Paved	56	7	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	58	7	0.003	0.001	0.97	0.24	0.00	0.00
<b>Offsite Total</b>							<b>13.22</b>	<b>1.50</b>	<b>0.05</b>	<b>0.01</b>
<b>Total</b>							<b>13.22</b>	<b>1.50</b>	<b>0.05</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 83**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Underground Conduit and Structures**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling <sup>d</sup>	CY	16	111	1.00E-03	1.52E-04	0.02	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 1,000 ft. long x 1 ft. wide x 3 ft. deep over 7 days

**Table 84**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.05	1.24	0.54	0.00	0.04	0.01	258.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	5.91	0.72	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.24</b>	<b>0.54</b>	<b>0.00</b>	<b>5.95</b>	<b>0.73</b>	<b>258.5</b>
<b>Total</b>	<b>1.57</b>	<b>7.79</b>	<b>18.25</b>	<b>0.04</b>	<b>6.47</b>	<b>1.21</b>	<b>3691.4</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.08	0.22	0.00	0.01	0.01	42.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.08</b>	<b>0.22</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>42.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	3.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>3.2</b>
<b>Total</b>	<b>0.02</b>	<b>0.10</b>	<b>0.23</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>46.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	25	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>



**Table 84**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.08	0.22	0.00	0.01	0.01	42.53	0.00	0.00	42.9
<b>Total</b>	<b>0.02</b>	<b>0.08</b>	<b>0.22</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>42.53</b>	<b>0.00</b>	<b>0.00</b>	<b>42.91</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	25	N/A	12
Bucket Truck	2	25	N/A	12
Worker Commute	4	25	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 84**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Install Cable**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.99	0.00	0.00	9.09
Bucket Truck	0.01	0.07	0.40	0.00	0.01	0.01	84.97	0.00	0.00	85.87
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.05</b>	<b>1.24</b>	<b>0.54</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>255.67</b>	<b>0.01</b>	<b>0.01</b>	<b>258.53</b>
<b>Total</b>	<b>0.05</b>	<b>1.24</b>	<b>0.54</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>255.67</b>	<b>0.01</b>	<b>0.01</b>	<b>258.53</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.00	0.00	1.07
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	2.02	0.00	0.00	2.04
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.20</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.20</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	2	25	0.564	0.056	1.13	0.11	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	25	0.003	0.001	0.03	0.01	0.00	0.00
Bucket Truck	2	Unpaved	2	25	0.977	0.098	3.91	0.39	0.05	0.00
Bucket Truck	2	Paved	10	25	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	25	0.003	0.001	0.77	0.19	0.01	0.00
<b>Offsite Total</b>							<b>5.91</b>	<b>0.72</b>	<b>0.07</b>	<b>0.01</b>
<b>Total</b>							<b>5.91</b>	<b>0.72</b>	<b>0.07</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 84**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Install Cable**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 85**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.15	0.00	0.03	0.00	181.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.09	0.43	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>3.12</b>	<b>0.43</b>	<b>181.7</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>3.12</b>	<b>0.43</b>	<b>181.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 85**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	2	N/A	12
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.01	0.03	0.00	0.00	0.00	17.97	0.00	0.00	18.19
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 85**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>179.69</b>	<b>0.01</b>	<b>0.01</b>	<b>181.75</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>179.69</b>	<b>0.01</b>	<b>0.01</b>	<b>181.75</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	2	2	0.564	0.056	2.25	0.23	0.00	0.00
Splicing Lab	2	Paved	10	2	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	4	0.003	0.001	0.77	0.19	0.00	0.00
<b>Offsite Total</b>							<b>3.09</b>	<b>0.43</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>							<b>3.09</b>	<b>0.43</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 85**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Splice Fiber Optic Cable**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 86**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.03	0.00	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.23</b>	<b>0.20</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.67	1.38	0.01	0.07	0.02	480.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.24	0.91	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.67</b>	<b>1.38</b>	<b>0.01</b>	<b>7.32</b>	<b>0.93</b>	<b>480.3</b>
<b>Total</b>	<b>0.90</b>	<b>4.49</b>	<b>7.70</b>	<b>0.02</b>	<b>7.55</b>	<b>1.13</b>	<b>1865.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.02	0.03	0.00	0.00	0.00	7.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.6</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.04	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>2.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>10.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	11	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**



**Table 86**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Underground Conduit and Structures**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.02	0.03	0.00	0.00	0.00	7.55	0.00	0.00	7.6
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.55</b>	<b>0.00</b>	<b>0.00</b>	<b>7.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	11	N/A	12
1-Ton Crew Cab Flatbed, 4x4	1	11	N/A	12
Water Truck	1	11	N/A	12
Concrete Truck	1	11	N/A	60
Worker Commute	5	11	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.99	0.00	0.00	9.09
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.99	0.00	0.00	9.09
Water Truck	0.01	0.03	0.20	0.00	0.01	0.00	42.48	0.00	0.00	42.94
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68

**Table 86**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Underground Conduit and Structures**

Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.08</b>	<b>1.67</b>	<b>1.38</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>475.02</b>	<b>0.01</b>	<b>0.02</b>	<b>480.26</b>
<b>Total</b>	<b>0.08</b>	<b>1.67</b>	<b>1.38</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>475.02</b>	<b>0.01</b>	<b>0.02</b>	<b>480.26</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.24
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.17	0.00	0.00	1.18
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.11	0.00	0.00	1.12
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.61</b>	<b>0.00</b>	<b>0.00</b>	<b>2.64</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.61</b>	<b>0.00</b>	<b>0.00</b>	<b>2.64</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	2	11	0.474	0.047	0.95	0.09	0.01	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	2	11	0.564	0.056	1.13	0.11	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	2	11	0.977	0.098	1.95	0.20	0.01	0.00
Water Truck	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Truck	1	Unpaved	2	11	0.977	0.098	1.95	0.20	0.01	0.00
Concrete Truck	1	Paved	58	11	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	58	11	0.003	0.001	0.97	0.24	0.01	0.00
<b>Offsite Total</b>							<b>7.24</b>	<b>0.91</b>	<b>0.04</b>	<b>0.00</b>
<b>Total</b>							<b>7.24</b>	<b>0.91</b>	<b>0.04</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 86**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Underground Conduit and Structures**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling <sup>d</sup>	CY	25	278	1.00E-03	1.52E-04	0.03	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 2,500 ft. long x 1 ft. wide x 3 ft. deep over 11 days

Table 87

Telecommunications Construction Emissions - Controlled Fugitive PM  
OPGW from Last Transmission Towers to Desert View Substation Wall - Install Cable

Daily Emissions Summary

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.08	2.34	0.31	0.00	0.05	0.00	339.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	10.97	1.32	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>11.02</b>	<b>1.32</b>	<b>339.0</b>
<b>Total</b>	<b>1.60</b>	<b>8.89</b>	<b>18.02</b>	<b>0.04</b>	<b>11.54</b>	<b>1.80</b>	<b>3771.9</b>

Total Emissions Summary

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.10	0.28	0.00	0.01	0.01	54.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.10</b>	<b>0.28</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>54.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.04	0.00	0.00	0.00	0.00	5.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.08	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>5.4</b>
<b>Total</b>	<b>0.03</b>	<b>0.14</b>	<b>0.29</b>	<b>0.00</b>	<b>0.09</b>	<b>0.02</b>	<b>60.3</b>

Construction Equipment Summary

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	32	8

Construction Equipment Exhaust Emission Factors

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

Construction Equipment Daily Exhaust Emissions

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>

**Table 87**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.10	0.28	0.00	0.01	0.01	54.44	0.00	0.00	54.9
<b>Total</b>	<b>0.02</b>	<b>0.10</b>	<b>0.28</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>54.44</b>	<b>0.00</b>	<b>0.00</b>	<b>54.93</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	32	N/A	1.5
Bucket Truck	2	32	N/A	1.5
Worker Commute	8	32	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 87**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Install Cable**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Bucket Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>335.18</b>	<b>0.02</b>	<b>0.01</b>	<b>339.00</b>
<b>Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>335.18</b>	<b>0.02</b>	<b>0.01</b>	<b>339.00</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.17
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.17	0.00	0.00	5.23
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.36</b>	<b>0.00</b>	<b>0.00</b>	<b>5.42</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.36</b>	<b>0.00</b>	<b>0.00</b>	<b>5.42</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	32	0.564	0.056	0.85	0.08	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	0	32	0.003	0.001	0.00	0.00	0.00	0.00
Bucket Truck	2	Unpaved	1.5	32	0.977	0.098	2.93	0.29	0.05	0.00
Bucket Truck	2	Paved	0	32	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	8	Paved	56.5	32	0.003	0.001	1.51	0.37	0.02	0.01
Worker Commute	8	Unpaved	1.5	32	0.474	0.047	5.68	0.57	0.00	0.00
<b>Offsite Total</b>							<b>10.97</b>	<b>1.32</b>	<b>0.08</b>	<b>0.01</b>
<b>Total</b>							<b>10.97</b>	<b>1.32</b>	<b>0.08</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 87**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Install Cable**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 88**

**Telecommunications Construction Emissions - Controlled Fugitive PM**

**OPGW from Last Transmission Towers to Desert View Substation Wall - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	165.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	5.29	0.64	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>5.31</b>	<b>0.64</b>	<b>165.8</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>5.31</b>	<b>0.64</b>	<b>165.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>



**Table 88**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	4	N/A	1.5
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	2.25	0.00	0.00	2.27
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 88**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	1.5	4	0.564	0.056	1.69	0.17	0.00	0.00
Splicing Lab	2	Paved	0	4	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	4	Paved	56.5	4	0.003	0.001	0.75	0.18	0.00	0.00
Worker Commute	4	Unpaved	1.5	4	0.474	0.047	2.84	0.28	0.00	0.00
<b>Offsite Total</b>							<b>5.29</b>	<b>0.64</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>							<b>5.29</b>	<b>0.64</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 88**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Splice Fiber Optic Cable**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 89**

**Telecommunications Construction Emissions - Controlled Fugitive PM  
OPGW from Last Transmission Towers to Desert View Substation Wall - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.02	0.00	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.23</b>	<b>0.19</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.68	1.45	0.01	0.07	0.02	485.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	9.23	1.10	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>9.30</b>	<b>1.12</b>	<b>485.8</b>
<b>Total</b>	<b>0.90</b>	<b>4.50</b>	<b>7.78</b>	<b>0.02</b>	<b>9.54</b>	<b>1.32</b>	<b>1871.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	9.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	3.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.04	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>3.4</b>
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.05</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>13.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	14	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 89**

**Telecommunications Construction Emissions - Controlled Fugitive PM  
OPGW from Last Transmission Towers to Desert View Substation Wall - Underground Conduit and Structures**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.01	0.02	0.04	0.00	0.00	0.00	9.61	0.00	0.00	9.7
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.61</b>	<b>0.00</b>	<b>0.00</b>	<b>9.70</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	14	N/A	1.5
1-Ton Crew Cab Flatbed, 4x4	1	14	N/A	1.5
Water Truck	1	14	N/A	18
Concrete Truck	1	14	N/A	60
Worker Commute	5	14	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68

**Table 89**

**Telecommunications Construction Emissions - Controlled Fugitive PM  
OPGW from Last Transmission Towers to Desert View Substation Wall - Underground Conduit and Structures**

Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>480.53</b>	<b>0.01</b>	<b>0.02</b>	<b>485.82</b>
<b>Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>480.53</b>	<b>0.01</b>	<b>0.02</b>	<b>485.82</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.45
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.49	0.00	0.00	1.50
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.42	0.00	0.00	1.43
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.36</b>	<b>0.00</b>	<b>0.00</b>	<b>3.40</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.36</b>	<b>0.00</b>	<b>0.00</b>	<b>3.40</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	1.5	14	0.474	0.047	0.71	0.07	0.00	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	0	14	0.003	0.001	0.00	0.00	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	14	0.564	0.056	0.85	0.08	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	0	14	0.003	0.001	0.00	0.00	0.00	0.00
Water Truck	1	Unpaved	1.5	14	0.977	0.098	1.47	0.15	0.01	0.00
Water Truck	1	Paved	16.5	14	0.003	0.001	0.05	0.01	0.00	0.00
Concrete Truck	1	Unpaved	1.5	14	0.977	0.098	1.47	0.15	0.01	0.00
Concrete Truck	1	Paved	58.5	14	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	56.5	14	0.003	0.001	0.94	0.23	0.01	0.00
Worker Commute	5	Unpaved	1.5	14	0.474	0.047	3.55	0.36	0.00	0.00
<b>Offsite Total</b>							<b>9.23</b>	<b>1.10</b>	<b>0.04</b>	<b>0.01</b>
<b>Total</b>							<b>9.23</b>	<b>1.10</b>	<b>0.04</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 89**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Underground Conduit and Structures**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	24	333	1.00E-03	1.52E-04	0.02	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 3,000 ft. long x 1 ft. wide x 3 ft. deep over 14 days

**Table 90**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**220 kV/500 kV Towers to Desert View Substation - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.08	2.34	0.31	0.00	0.05	0.00	339.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	10.97	1.32	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>11.02</b>	<b>1.32</b>	<b>339.0</b>
<b>Total</b>	<b>1.60</b>	<b>8.89</b>	<b>18.02</b>	<b>0.04</b>	<b>11.54</b>	<b>1.80</b>	<b>3771.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.07	0.18	0.00	0.01	0.00	34.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.18</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>3.4</b>
<b>Total</b>	<b>0.02</b>	<b>0.09</b>	<b>0.18</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>37.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	20	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>



**Table 90**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**220 kV/500 kV Towers to Desert View Substation - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.07	0.18	0.00	0.01	0.00	34.03	0.00	0.00	34.3
<b>Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.18</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.03</b>	<b>0.00</b>	<b>0.00</b>	<b>34.33</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	20	N/A	1.5
Bucket Truck	2	20	N/A	1.5
Worker Commute	8	20	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 90**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**220 kV/500 kV Towers to Desert View Substation - Install Cable**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Bucket Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>335.18</b>	<b>0.02</b>	<b>0.01</b>	<b>339.00</b>
<b>Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>335.18</b>	<b>0.02</b>	<b>0.01</b>	<b>339.00</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.35</b>	<b>0.00</b>	<b>0.00</b>	<b>3.39</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.35</b>	<b>0.00</b>	<b>0.00</b>	<b>3.39</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	20	0.564	0.056	0.85	0.08	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	0	20	0.003	0.001	0.00	0.00	0.00	0.00
Bucket Truck	2	Unpaved	1.5	20	0.977	0.098	2.93	0.29	0.03	0.00
Bucket Truck	2	Paved	0	20	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	8	Paved	56.5	20	0.003	0.001	1.51	0.37	0.02	0.00
Worker Commute	8	Unpaved	1.5	20	0.474	0.047	5.68	0.57	0.00	0.00
<b>Offsite Total</b>							<b>10.97</b>	<b>1.32</b>	<b>0.05</b>	<b>0.01</b>
<b>Total</b>							<b>10.97</b>	<b>1.32</b>	<b>0.05</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 90**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**220 kV/500 kV Towers to Desert View Substation - Install Cable**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 91**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**220 kV/500 kV Towers to Desert View Substation - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	165.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	5.29	0.64	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>5.31</b>	<b>0.64</b>	<b>165.8</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>5.31</b>	<b>0.64</b>	<b>165.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 91**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**220 kV/500 kV Towers to Desert View Substation - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	4	N/A	1.5
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	2.25	0.00	0.00	2.27
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 91**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**220 kV/500 kV Towers to Desert View Substation - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	1.5	4	0.564	0.056	1.69	0.17	0.00	0.00
Splicing Lab	2	Paved	0	4	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	4	Paved	56.5	4	0.003	0.001	0.75	0.18	0.00	0.00
Worker Commute	4	Unpaved	1.5	4	0.474	0.047	2.84	0.28	0.00	0.00
<b>Offsite Total</b>							<b>5.29</b>	<b>0.64</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>							<b>5.29</b>	<b>0.64</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 91**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**220 kV/500 kV Towers to Desert View Substation - Splice Fiber Optic Cable**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 92**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**220 kV/500 kV Towers to Desert View Substation - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.03	0.00	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.24</b>	<b>0.20</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.68	1.45	0.01	0.07	0.02	485.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	9.23	1.10	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>9.30</b>	<b>1.12</b>	<b>485.8</b>
<b>Total</b>	<b>0.90</b>	<b>4.50</b>	<b>7.78</b>	<b>0.02</b>	<b>9.54</b>	<b>1.32</b>	<b>1871.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	9.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>2.6</b>
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.05</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>11.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	13	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**



**Table 92**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**220 kV/500 kV Towers to Desert View Substation - Underground Conduit and Structures**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.01	0.02	0.04	0.00	0.00	0.00	8.92	0.00	0.00	9.0
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.92</b>	<b>0.00</b>	<b>0.00</b>	<b>9.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	13	N/A	1.5
1-Ton Crew Cab Flatbed, 4x4	1	13	N/A	1.5
Water Truck	1	13	N/A	18
Concrete Truck	1	8	N/A	60
Worker Commute	5	13	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68

**Table 92**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**220 kV/500 kV Towers to Desert View Substation - Underground Conduit and Structures**

Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>480.53</b>	<b>0.01</b>	<b>0.02</b>	<b>485.82</b>
<b>Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>480.53</b>	<b>0.01</b>	<b>0.02</b>	<b>485.82</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.42
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.86
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.31	0.00	0.00	1.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.59</b>	<b>0.00</b>	<b>0.00</b>	<b>2.62</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.59</b>	<b>0.00</b>	<b>0.00</b>	<b>2.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	1.5	13	0.474	0.047	0.71	0.07	0.00	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	0	13	0.003	0.001	0.00	0.00	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	13	0.564	0.056	0.85	0.08	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	0	13	0.003	0.001	0.00	0.00	0.00	0.00
Water Truck	1	Unpaved	1.5	13	0.977	0.098	1.47	0.15	0.01	0.00
Water Truck	1	Paved	16.5	13	0.003	0.001	0.05	0.01	0.00	0.00
Concrete Truck	1	Unpaved	1.5	8	0.977	0.098	1.47	0.15	0.01	0.00
Concrete Truck	1	Paved	58.5	8	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	56.5	13	0.003	0.001	0.94	0.23	0.01	0.00
Worker Commute	5	Unpaved	1.5	13	0.474	0.047	3.55	0.36	0.00	0.00
<b>Offsite Total</b>							<b>9.23</b>	<b>1.10</b>	<b>0.03</b>	<b>0.00</b>
<b>Total</b>							<b>9.23</b>	<b>1.10</b>	<b>0.03</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 92**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**220 kV/500 kV Towers to Desert View Substation - Underground Conduit and Structures**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	30	389	1.00E-03	1.52E-04	0.03	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 3,500 ft. long x 1 ft. wide x 3 ft. deep over 13 days

**Table 93**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Install 5 Foot Crossarm**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.76	3.28	8.86	0.02	0.26	0.24	1,716.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.76</b>	<b>3.28</b>	<b>8.86</b>	<b>0.02</b>	<b>0.26</b>	<b>0.24</b>	<b>1716.4</b>
Offsite Motor Vehicle Exhaust	0.09	2.40	0.63	0.00	0.06	0.01	414.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	26.74	2.89	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.40</b>	<b>0.63</b>	<b>0.00</b>	<b>26.80</b>	<b>2.90</b>	<b>414.2</b>
<b>Total</b>	<b>0.85</b>	<b>5.67</b>	<b>9.49</b>	<b>0.02</b>	<b>27.07</b>	<b>3.14</b>	<b>2130.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.04	0.12	0.00	0.00	0.00	22.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.04</b>	<b>0.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.03	0.01	0.00	0.00	0.00	5.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.15	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.15</b>	<b>0.02</b>	<b>5.4</b>
<b>Total</b>	<b>0.01</b>	<b>0.07</b>	<b>0.12</b>	<b>0.00</b>	<b>0.15</b>	<b>0.02</b>	<b>27.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	26	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	0.76	3.28	8.86	0.02	0.26	0.24	1701.32	0.07	0.04	1,716.4
<b>Total</b>	<b>0.76</b>	<b>3.28</b>	<b>8.86</b>	<b>0.02</b>	<b>0.26</b>	<b>0.24</b>	<b>1701.32</b>	<b>0.07</b>	<b>0.04</b>	<b>1716.44</b>

**Table 93  
Telecommunications Construction Emissions - Controlled Fugitive PM  
Apple Valley to Desert View Substation - Install 5 Foot Crossarm**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.01	0.04	0.12	0.00	0.00	0.00	22.12	0.00	0.00	22.3
<b>Total</b>	<b>0.01</b>	<b>0.04</b>	<b>0.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.12</b>	<b>0.00</b>	<b>0.00</b>	<b>22.31</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	26	N/A	11
Bucket Truck	2	26	N/A	11
Worker Commute	8	26	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 93**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Install 5 Foot Crossarm**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
Bucket Truck	0.01	0.06	0.36	0.00	0.01	0.01	77.89	0.00	0.00	78.72
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.09</b>	<b>2.40</b>	<b>0.63</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>409.56</b>	<b>0.02</b>	<b>0.01</b>	<b>414.18</b>
<b>Total</b>	<b>0.09</b>	<b>2.40</b>	<b>0.63</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>409.56</b>	<b>0.02</b>	<b>0.01</b>	<b>414.18</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.01	0.00	0.00	1.02
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	4.20	0.00	0.00	4.25
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.32</b>	<b>0.00</b>	<b>0.00</b>	<b>5.38</b>
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.32</b>	<b>0.00</b>	<b>0.00</b>	<b>5.38</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	26	0.564	0.056	2.25	0.23	0.03	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	7	26	0.003	0.001	0.02	0.01	0.00	0.00
Bucket Truck	2	Unpaved	4	26	0.977	0.098	7.82	0.78	0.10	0.01
Bucket Truck	2	Paved	7	26	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	8	Paved	54	26	0.003	0.001	1.44	0.35	0.02	0.00
Worker Commute	8	Unpaved	4	26	0.474	0.047	15.16	1.52	0.00	0.00
<b>Offsite Total</b>							<b>26.74</b>	<b>2.89</b>	<b>0.15</b>	<b>0.02</b>
<b>Total</b>							<b>26.74</b>	<b>2.89</b>	<b>0.15</b>	<b>0.02</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 93**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Install 5 Foot Crossarm**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 94**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Install Down Guys**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.38	1.64	4.43	0.01	0.13	0.12	858.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.38</b>	<b>1.64</b>	<b>4.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.12</b>	<b>858.2</b>
Offsite Motor Vehicle Exhaust	0.09	2.37	0.45	0.00	0.06	0.01	374.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	22.81	2.50	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.37</b>	<b>0.45</b>	<b>0.00</b>	<b>22.86</b>	<b>2.50</b>	<b>374.8</b>
<b>Total</b>	<b>0.47</b>	<b>4.00</b>	<b>4.88</b>	<b>0.01</b>	<b>23.00</b>	<b>2.62</b>	<b>1233.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	3.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.4</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>1.5</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>4.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	1	8	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	0.38	1.64	4.43	0.01	0.13	0.12	850.66	0.03	0.02	858.2
<b>Total</b>	<b>0.38</b>	<b>1.64</b>	<b>4.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.12</b>	<b>850.66</b>	<b>0.03</b>	<b>0.02</b>	<b>858.22</b>



**Table 94  
Telecommunications Construction Emissions - Controlled Fugitive PM  
Apple Valley to Desert View Substation - Install Down Guys**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.00	0.01	0.02	0.00	0.00	0.00	3.40	0.00	0.00	3.4
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.40</b>	<b>0.00</b>	<b>0.00</b>	<b>3.43</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	8	N/A	11
Bucket Truck	1	8	N/A	11
Worker Commute	8	8	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 94**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Install Down Guys**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
Bucket Truck	0.00	0.03	0.18	0.00	0.01	0.00	38.94	0.00	0.00	39.36
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.09</b>	<b>2.37</b>	<b>0.45</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>370.61</b>	<b>0.02</b>	<b>0.01</b>	<b>374.82</b>
<b>Total</b>	<b>0.09</b>	<b>2.37</b>	<b>0.45</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>370.61</b>	<b>0.02</b>	<b>0.01</b>	<b>374.82</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.29	0.00	0.00	1.31
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.48</b>	<b>0.00</b>	<b>0.00</b>	<b>1.50</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.48</b>	<b>0.00</b>	<b>0.00</b>	<b>1.50</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	8	0.564	0.056	2.25	0.23	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	7	8	0.003	0.001	0.02	0.01	0.00	0.00
Bucket Truck	1	Unpaved	4	8	0.977	0.098	3.91	0.39	0.02	0.00
Bucket Truck	1	Paved	7	8	0.003	0.001	0.02	0.01	0.00	0.00
Worker Commute	8	Paved	54	8	0.003	0.001	1.44	0.35	0.01	0.00
Worker Commute	8	Unpaved	4	8	0.474	0.047	15.16	1.52	0.00	0.00
<b>Offsite Total</b>							<b>22.81</b>	<b>2.50</b>	<b>0.03</b>	<b>0.00</b>
<b>Total</b>							<b>22.81</b>	<b>2.50</b>	<b>0.03</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 94**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Install Down Guys**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 95  
Telecommunications Construction Emissions - Controlled Fugitive PM  
Apple Valley to Desert View Substation - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.05	1.23	0.50	0.00	0.04	0.01	250.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	18.44	1.96	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.23</b>	<b>0.50</b>	<b>0.00</b>	<b>18.48</b>	<b>1.97</b>	<b>250.6</b>
<b>Total</b>	<b>1.57</b>	<b>7.79</b>	<b>18.21</b>	<b>0.04</b>	<b>19.01</b>	<b>2.45</b>	<b>3683.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.03	0.11	0.31	0.00	0.01	0.01	60.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.03</b>	<b>0.11</b>	<b>0.31</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>60.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	4.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.19	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.19</b>	<b>0.02</b>	<b>4.4</b>
<b>Total</b>	<b>0.03</b>	<b>0.14</b>	<b>0.32</b>	<b>0.00</b>	<b>0.20</b>	<b>0.03</b>	<b>64.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	35	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>

**Table 95  
Telecommunications Construction Emissions - Controlled Fugitive PM  
Apple Valley to Desert View Substation - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.03	0.11	0.31	0.00	0.01	0.01	59.55	0.00	0.00	60.1
<b>Total</b>	<b>0.03</b>	<b>0.11</b>	<b>0.31</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>59.55</b>	<b>0.00</b>	<b>0.00</b>	<b>60.08</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	35	N/A	11
Bucket Truck	2	35	N/A	11
Worker Commute	4	35	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 95**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Install Cable**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
Bucket Truck	0.01	0.06	0.36	0.00	0.01	0.01	77.89	0.00	0.00	78.72
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.05</b>	<b>1.23</b>	<b>0.50</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>247.84</b>	<b>0.01</b>	<b>0.01</b>	<b>250.62</b>
<b>Total</b>	<b>0.05</b>	<b>1.23</b>	<b>0.50</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>247.84</b>	<b>0.01</b>	<b>0.01</b>	<b>250.62</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.15
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.36	0.00	0.00	1.38
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.83	0.00	0.00	2.86
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.34</b>	<b>0.00</b>	<b>0.00</b>	<b>4.39</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.34</b>	<b>0.00</b>	<b>0.00</b>	<b>4.39</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	35	0.564	0.056	2.25	0.23	0.04	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	7	35	0.003	0.001	0.02	0.01	0.00	0.00
Bucket Truck	2	Unpaved	4	35	0.977	0.098	7.82	0.78	0.14	0.01
Bucket Truck	2	Paved	7	35	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	4	Paved	54	35	0.003	0.001	0.72	0.18	0.01	0.00
Worker Commute	4	Unpaved	4	35	0.474	0.047	7.58	0.76	0.00	0.00
<b>Offsite Total</b>							<b>18.44</b>	<b>1.96</b>	<b>0.19</b>	<b>0.02</b>
<b>Total</b>							<b>18.44</b>	<b>1.96</b>	<b>0.19</b>	<b>0.02</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 95  
Telecommunications Construction Emissions - Controlled Fugitive PM  
Apple Valley to Desert View Substation - Install Cable**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 96**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.15	0.00	0.03	0.00	180.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	12.85	1.40	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>12.88</b>	<b>1.40</b>	<b>180.2</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>12.88</b>	<b>1.40</b>	<b>180.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>



**Table 96  
Telecommunications Construction Emissions - Controlled Fugitive PM  
Apple Valley to Desert View Substation - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	8	N/A	11
Worker Commute	4	8	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.01	0.02	0.00	0.00	0.00	16.47	0.00	0.00	16.67
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 96**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>178.19</b>	<b>0.01</b>	<b>0.01</b>	<b>180.23</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>178.19</b>	<b>0.01</b>	<b>0.01</b>	<b>180.23</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.65
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.72</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	4	8	0.564	0.056	4.51	0.45	0.02	0.00
Splicing Lab	2	Paved	7	8	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	4	Paved	54	8	0.003	0.001	0.72	0.18	0.00	0.00
Worker Commute	4	Unpaved	4	8	0.474	0.047	7.58	0.76	0.00	0.00
<b>Offsite Total</b>							<b>12.85</b>	<b>1.40</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>12.85</b>	<b>1.40</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 96**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Splice Fiber Optic Cable**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 97**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Underground Conduit from Pole to Pole**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.02	0.00	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.23</b>	<b>0.19</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.09	1.69	1.48	0.01	0.08	0.03	500.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	14.31	1.61	
<b>Offsite Total</b>	<b>0.09</b>	<b>1.69</b>	<b>1.48</b>	<b>0.01</b>	<b>14.38</b>	<b>1.64</b>	<b>500.2</b>
<b>Total</b>	<b>0.90</b>	<b>4.51</b>	<b>7.80</b>	<b>0.02</b>	<b>14.61</b>	<b>1.83</b>	<b>1885.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	6.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.2</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>2.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>8.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	9	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 97**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Underground Conduit from Pole to Pole**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.01	0.03	0.00	0.00	0.00	6.18	0.00	0.00	6.2
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.18</b>	<b>0.00</b>	<b>0.00</b>	<b>6.23</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	9	N/A	11
1-Ton Crew Cab Flatbed, 4x4	1	9	N/A	11
Water Truck	1	9	N/A	18
Concrete Truck	1	6	N/A	60
Worker Commute	5	13	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68

**Table 97**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Underground Conduit from Pole to Pole**

Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.09</b>	<b>1.69</b>	<b>1.48</b>	<b>0.01</b>	<b>0.08</b>	<b>0.03</b>	<b>494.76</b>	<b>0.01</b>	<b>0.02</b>	<b>500.21</b>
<b>Total</b>	<b>0.09</b>	<b>1.69</b>	<b>1.48</b>	<b>0.01</b>	<b>0.08</b>	<b>0.03</b>	<b>494.76</b>	<b>0.01</b>	<b>0.02</b>	<b>500.21</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.29
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.31	0.00	0.00	1.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.31</b>	<b>0.00</b>	<b>0.00</b>	<b>2.34</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.31</b>	<b>0.00</b>	<b>0.00</b>	<b>2.34</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	4	9	0.474	0.047	1.89	0.19	0.01	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	7	9	0.003	0.001	0.02	0.01	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	9	0.564	0.056	2.25	0.23	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	7	9	0.003	0.001	0.02	0.01	0.00	0.00
Water Truck	1	Unpaved	4	9	0.977	0.098	3.91	0.39	0.02	0.00
Water Truck	1	Paved	14	9	0.003	0.001	0.05	0.01	0.00	0.00
Concrete Truck	1	Unpaved	1.5	6	0.977	0.098	1.47	0.15	0.00	0.00
Concrete Truck	1	Paved	58.5	6	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	56.5	13	0.003	0.001	0.94	0.23	0.01	0.00
Worker Commute	5	Unpaved	1.5	13	0.474	0.047	3.55	0.36	0.00	0.00
<b>Offsite Total</b>							<b>14.31</b>	<b>1.61</b>	<b>0.05</b>	<b>0.01</b>
<b>Total</b>							<b>14.31</b>	<b>1.61</b>	<b>0.05</b>	<b>0.01</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 97**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Underground Conduit from Pole to Pole**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	20	178	1.00E-03	1.52E-04	0.02	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 1,600 ft. long x 1 ft. wide x 3 ft. deep over 9 days

**Table 98**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Restoration**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.08	2.10	0.55	0.00	0.05	0.01	367.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	14.80	1.69	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.10</b>	<b>0.55</b>	<b>0.00</b>	<b>14.86</b>	<b>1.69</b>	<b>367.3</b>
<b>Total</b>	<b>0.08</b>	<b>2.10</b>	<b>0.55</b>	<b>0.00</b>	<b>14.86</b>	<b>1.69</b>	<b>367.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	2.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>2.0</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>2.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None	200	1	9	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0



**Table 98**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Restoration**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab, 4x4	2	11	N/A	11
Water Truck	1	11	N/A	18
Worker Commute	7	11	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 98**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Apple Valley to Desert View Substation - Restoration**

<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	16.47	0.00	0.00	16.67
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Worker Commute	0.07	2.04	0.22	0.00	0.04	0.00	283.01	0.02	0.01	286.24
<b>Offsite Total</b>	<b>0.08</b>	<b>2.10</b>	<b>0.55</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>363.20</b>	<b>0.02</b>	<b>0.01</b>	<b>367.31</b>
<b>Total</b>	<b>0.08</b>	<b>2.10</b>	<b>0.55</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>363.20</b>	<b>0.02</b>	<b>0.01</b>	<b>367.31</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.35
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.56	0.00	0.00	1.57
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.02</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.02</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	2	Unpaved	4	11	0.564	0.056	4.51	0.45	0.02	0.00
1-Ton Crew Cab, 4x4	2	Paved	7	11	0.003	0.001	0.05	0.01	0.00	0.00
Water Truck	1	Unpaved	4	11	0.977	0.098	3.91	0.39	0.02	0.00
Water Truck	1	Paved	14	11	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	7	Paved	56.5	11	0.003	0.001	1.32	0.32	0.01	0.00
Worker Commute	7	Unpaved	1.5	11	0.474	0.047	4.97	0.50	0.00	0.00
<b>Offsite Total</b>							<b>14.80</b>	<b>1.69</b>	<b>0.05</b>	<b>0.01</b>

**Table 98  
Telecommunications Construction Emissions - Controlled Fugitive PM  
Apple Valley to Desert View Substation - Restoration**

<b>Total</b>							<b>14.80</b>	<b>1.69</b>	<b>0.05</b>	<b>0.01</b>
--------------	--	--	--	--	--	--	--------------	-------------	-------------	-------------

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 99**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Install 5 Foot Crossarm**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.11	2.51	1.25	0.01	0.08	0.02	556.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.83	0.45	
<b>Offsite Total</b>	<b>0.11</b>	<b>2.51</b>	<b>1.25</b>	<b>0.01</b>	<b>1.92</b>	<b>0.47</b>	<b>556.6</b>
<b>Total</b>	<b>1.63</b>	<b>9.06</b>	<b>18.96</b>	<b>0.04</b>	<b>2.44</b>	<b>0.96</b>	<b>3989.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.07	0.18	0.00	0.01	0.00	34.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.18</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.03	0.01	0.00	0.00	0.00	5.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>5.6</b>
<b>Total</b>	<b>0.02</b>	<b>0.09</b>	<b>0.19</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>39.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	20	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>

**Table 99**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Install 5 Foot Crossarm**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.07	0.18	0.00	0.01	0.00	34.03	0.00	0.00	34.3
<b>Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.18</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.03</b>	<b>0.00</b>	<b>0.00</b>	<b>34.33</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	20	N/A	29
Bucket Truck	2	20	N/A	29
Worker Commute	8	20	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 99**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Install 5 Foot Crossarm**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
Bucket Truck	0.02	0.17	0.96	0.00	0.03	0.02	205.33	0.00	0.01	207.53
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.11</b>	<b>2.51</b>	<b>1.25</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>550.49</b>	<b>0.02</b>	<b>0.02</b>	<b>556.63</b>
<b>Total</b>	<b>0.11</b>	<b>2.51</b>	<b>1.25</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>550.49</b>	<b>0.02</b>	<b>0.02</b>	<b>556.63</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.22
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.05	0.00	0.00	2.08
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.50</b>	<b>0.00</b>	<b>0.00</b>	<b>5.57</b>
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.50</b>	<b>0.00</b>	<b>0.00</b>	<b>5.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Paved	29	20	0.003	0.001	0.10	0.02	0.00	0.00
Bucket Truck	2	Paved	29	20	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	8	Paved	58	20	0.003	0.001	1.54	0.38	0.02	0.00
<b>Offsite Total</b>							<b>1.83</b>	<b>0.45</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>1.83</b>	<b>0.45</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 99**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Install 5 Foot Crossarm**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 100**

**Telecommunications Construction Emissions - Controlled Fugitive PM  
Gale to Pisgah Fiber Optic Cable - Replacement Wood Pole Haul/Install**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.40	14.50	31.28	0.07	0.98	0.91	7,395.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.40</b>	<b>14.50</b>	<b>31.28</b>	<b>0.07</b>	<b>0.98</b>	<b>0.91</b>	<b>7395.8</b>
Offsite Motor Vehicle Exhaust	0.14	2.69	2.27	0.01	0.12	0.04	808.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2.22	0.55	
<b>Offsite Total</b>	<b>0.14</b>	<b>2.69</b>	<b>2.27</b>	<b>0.01</b>	<b>2.34</b>	<b>0.59</b>	<b>808.1</b>
<b>Total</b>	<b>3.54</b>	<b>17.19</b>	<b>33.55</b>	<b>0.08</b>	<b>3.33</b>	<b>1.49</b>	<b>8203.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.07	0.16	0.00	0.00	0.00	37.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>37.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	4.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>4.0</b>
<b>Total</b>	<b>0.02</b>	<b>0.09</b>	<b>0.17</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>41.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30-Ton Crane	300	1	10	8
Bucket Truck	300	2	10	8
60' Digger Derrick	300	1	10	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30-Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
60' Digger Derrick	300	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

a From Table 111

**Construction Equipment Daily Exhaust Emissions**



**Table 100**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Replacement Wood Pole Haul/Install**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30-Ton Crane	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
60' Digger Derrick	0.83	4.40	5.00	0.02	0.15	0.14	2488.23	0.07	0.06	2,509.8
<b>Total</b>	<b>3.40</b>	<b>14.50</b>	<b>31.28</b>	<b>0.07</b>	<b>0.98</b>	<b>0.91</b>	<b>7330.39</b>	<b>0.31</b>	<b>0.19</b>	<b>7395.78</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30-Ton Crane	0.01	0.02	0.04	0.00	0.00	0.00	7.20	0.00	0.00	7.3
Bucket Truck	0.01	0.03	0.09	0.00	0.00	0.00	17.01	0.00	0.00	17.2
60' Digger Derrick	0.00	0.02	0.02	0.00	0.00	0.00	12.44	0.00	0.00	12.5
<b>Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>36.65</b>	<b>0.00</b>	<b>0.00</b>	<b>36.98</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	2	10	N/A	29
1-Ton Crew Cab Flatbed, 4x4	1	10	N/A	29
Bucket Truck	2	10	N/A	29
Flat Bed Truck w/Derrick	1	10	N/A	29
40-Foot Flat Bed Truck/Trailer	1	10	N/A	29
Worker Commute	8	10	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

**Table 100**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Replacement Wood Pole Haul/Install**

1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck w/Derrick	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
40-Foot Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	43.43	0.00	0.00	43.95
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
Bucket Truck	0.02	0.17	0.96	0.00	0.03	0.02	205.33	0.00	0.01	207.53
Flat Bed Truck w/Derrick	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
40-Foot Flat Bed Truck/Trailer	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.14</b>	<b>2.69</b>	<b>2.27</b>	<b>0.01</b>	<b>0.12</b>	<b>0.04</b>	<b>799.25</b>	<b>0.02</b>	<b>0.03</b>	<b>808.11</b>
<b>Total</b>	<b>0.14</b>	<b>2.69</b>	<b>2.27</b>	<b>0.01</b>	<b>0.12</b>	<b>0.04</b>	<b>799.25</b>	<b>0.02</b>	<b>0.03</b>	<b>808.11</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.22
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.03	0.00	0.00	1.04
Flat Bed Truck w/Derrick	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.52
40-Foot Flat Bed Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.52
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.62	0.00	0.00	1.64
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.04</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.04</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 100**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Replacement Wood Pole Haul/Install**

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	2	Paved	29	10	0.003	0.001	0.19	0.05	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	29	10	0.003	0.001	0.10	0.02	0.00	0.00
Bucket Truck	2	Paved	29	10	0.003	0.001	0.19	0.05	0.00	0.00
Flat Bed Truck w/Derrick	1	Paved	29	10	0.003	0.001	0.10	0.02	0.00	0.00
40-Foot Flat Bed Truck/Trailer	1	Paved	29	10	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	8	Paved	58	10	0.003	0.001	1.54	0.38	0.01	0.00
<b>Offsite Total</b>							<b>2.22</b>	<b>0.55</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>2.22</b>	<b>0.55</b>	<b>0.01</b>	<b>0.00</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 101**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Install Down Guys**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.38	1.64	4.43	0.01	0.13	0.12	858.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.38</b>	<b>1.64</b>	<b>4.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.12</b>	<b>858.2</b>
Offsite Motor Vehicle Exhaust	0.10	2.42	0.77	0.01	0.07	0.01	452.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.74	0.43	
<b>Offsite Total</b>	<b>0.10</b>	<b>2.42</b>	<b>0.77</b>	<b>0.01</b>	<b>1.81</b>	<b>0.44</b>	<b>452.9</b>
<b>Total</b>	<b>0.47</b>	<b>4.06</b>	<b>5.19</b>	<b>0.01</b>	<b>1.94</b>	<b>0.56</b>	<b>1311.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.01	0.00	0.00	0.00	2.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.6</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>1.4</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>3.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	1	6	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	0.38	1.64	4.43	0.01	0.13	0.12	850.66	0.03	0.02	858.2
<b>Total</b>	<b>0.38</b>	<b>1.64</b>	<b>4.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.12</b>	<b>850.66</b>	<b>0.03</b>	<b>0.02</b>	<b>858.22</b>

**Table 101**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Install Down Guys**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.55	0.00	0.00	2.6
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.55</b>	<b>0.00</b>	<b>0.00</b>	<b>2.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	6	N/A	29
Bucket Truck	1	6	N/A	29
Worker Commute	8	6	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 101**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Install Down Guys**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
Bucket Truck	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.10</b>	<b>2.42</b>	<b>0.77</b>	<b>0.01</b>	<b>0.07</b>	<b>0.01</b>	<b>447.82</b>	<b>0.02</b>	<b>0.01</b>	<b>452.87</b>
<b>Total</b>	<b>0.10</b>	<b>2.42</b>	<b>0.77</b>	<b>0.01</b>	<b>0.07</b>	<b>0.01</b>	<b>447.82</b>	<b>0.02</b>	<b>0.01</b>	<b>452.87</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.31
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	0.97	0.00	0.00	0.98
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.34</b>	<b>0.00</b>	<b>0.00</b>	<b>1.36</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.34</b>	<b>0.00</b>	<b>0.00</b>	<b>1.36</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Paved	29	6	0.003	0.001	0.10	0.02	0.00	0.00
Bucket Truck	1	Paved	29	6	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	8	Paved	58	6	0.003	0.001	1.54	0.38	0.00	0.00
<b>Offsite Total</b>							<b>1.74</b>	<b>0.43</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>1.74</b>	<b>0.43</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 101**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Install Down Guys**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 102**

**Telecommunications Construction Emissions - Controlled Fugitive PM  
Gale to Pisgah Fiber Optic Cable - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.11	2.52	1.28	0.01	0.09	0.02	578.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.93	0.47	
<b>Offsite Total</b>	<b>0.11</b>	<b>2.52</b>	<b>1.28</b>	<b>0.01</b>	<b>2.02</b>	<b>0.50</b>	<b>578.6</b>
<b>Total</b>	<b>1.63</b>	<b>9.07</b>	<b>18.99</b>	<b>0.04</b>	<b>2.55</b>	<b>0.98</b>	<b>4011.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.06	0.16	0.00	0.00	0.00	30.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>30.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	5.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>5.2</b>
<b>Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.17</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>36.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	18	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>



**Table 102**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.01	0.06	0.16	0.00	0.00	0.00	30.62	0.00	0.00	30.9
<b>Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>30.62</b>	<b>0.00</b>	<b>0.00</b>	<b>30.90</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	2	18	N/A	29
Bucket Truck	2	18	N/A	29
Worker Commute	8	18	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 102**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Install Cable**

3/4-Ton Pick-up Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	43.43	0.00	0.00	43.95
Bucket Truck	0.02	0.17	0.96	0.00	0.03	0.02	205.33	0.00	0.01	207.53
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.11</b>	<b>2.52</b>	<b>1.28</b>	<b>0.01</b>	<b>0.09</b>	<b>0.02</b>	<b>572.20</b>	<b>0.02</b>	<b>0.02</b>	<b>578.60</b>
<b>Total</b>	<b>0.11</b>	<b>2.52</b>	<b>1.28</b>	<b>0.01</b>	<b>0.09</b>	<b>0.02</b>	<b>572.20</b>	<b>0.02</b>	<b>0.02</b>	<b>578.60</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.40
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.85	0.00	0.00	1.87
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.91	0.00	0.00	2.94
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.15</b>	<b>0.00</b>	<b>0.00</b>	<b>5.21</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.15</b>	<b>0.00</b>	<b>0.00</b>	<b>5.21</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	2	Paved	29	18	0.003	0.001	0.19	0.05	0.00	0.00
Bucket Truck	2	Paved	29	18	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	8	Paved	58	18	0.003	0.001	1.54	0.38	0.01	0.00
<b>Offsite Total</b>							<b>1.93</b>	<b>0.47</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>1.93</b>	<b>0.47</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 102**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Install Cable**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 103**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.19	0.19	0.00	0.03	0.00	207.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.97	0.24	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.19</b>	<b>0.19</b>	<b>0.00</b>	<b>1.00</b>	<b>0.24</b>	<b>207.5</b>
<b>Total</b>	<b>0.04</b>	<b>1.19</b>	<b>0.19</b>	<b>0.00</b>	<b>1.00</b>	<b>0.24</b>	<b>207.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.5</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 103**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	34	N/A	29
Worker Commute	4	34	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.02	0.06	0.00	0.01	0.00	43.43	0.00	0.00	43.95
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 103**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.19</b>	<b>0.19</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>205.15</b>	<b>0.01</b>	<b>0.01</b>	<b>207.51</b>
<b>Total</b>	<b>0.04</b>	<b>1.19</b>	<b>0.19</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>205.15</b>	<b>0.01</b>	<b>0.01</b>	<b>207.51</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.75
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.75	0.00	0.00	2.78
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.49</b>	<b>0.00</b>	<b>0.00</b>	<b>3.53</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.49</b>	<b>0.00</b>	<b>0.00</b>	<b>3.53</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Paved	29	34	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	4	Paved	58	34	0.003	0.001	0.77	0.19	0.01	0.00
<b>Offsite Total</b>							<b>0.97</b>	<b>0.24</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>0.97</b>	<b>0.24</b>	<b>0.02</b>	<b>0.00</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>

**Table 103**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Splice Fiber Optic Cable**

Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 104**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Underground Conduit & Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.02	0.00	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.23</b>	<b>0.19</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.64	1.18	0.00	0.07	0.02	455.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.35	0.33	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.64</b>	<b>1.18</b>	<b>0.00</b>	<b>1.42</b>	<b>0.35</b>	<b>455.9</b>
<b>Total</b>	<b>0.90</b>	<b>4.47</b>	<b>7.51</b>	<b>0.02</b>	<b>1.65</b>	<b>0.55</b>	<b>1841.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.04	0.08	0.00	0.00	0.00	17.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.04</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	5.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>5.2</b>
<b>Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.09</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>22.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	25	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**



**Table 104**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Underground Conduit & Structures**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.01	0.04	0.08	0.00	0.00	0.00	17.16	0.00	0.00	17.3
<b>Total</b>	<b>0.01</b>	<b>0.04</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.16</b>	<b>0.00</b>	<b>0.00</b>	<b>17.32</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	25	N/A	29
1-Ton Crew Cab Flatbed, 4x4	1	25	N/A	29
Water Truck	1	25	N/A	29
Concrete Truck	1	16	N/A	29
Worker Commute	5	25	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
Water Truck	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
Concrete Truck	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76

**Table 104**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Underground Conduit & Structures**

Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.08</b>	<b>1.64</b>	<b>1.18</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>450.91</b>	<b>0.01</b>	<b>0.02</b>	<b>455.93</b>
<b>Total</b>	<b>0.08</b>	<b>1.64</b>	<b>1.18</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>450.91</b>	<b>0.01</b>	<b>0.02</b>	<b>455.93</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.28	0.00	0.00	1.30
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.83
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.53	0.00	0.00	2.56
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.17</b>	<b>0.00</b>	<b>0.00</b>	<b>5.23</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.17</b>	<b>0.00</b>	<b>0.00</b>	<b>5.23</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Paved	29	25	0.003	0.001	0.10	0.02	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	29	25	0.003	0.001	0.10	0.02	0.00	0.00
Water Truck	1	Paved	29	25	0.003	0.001	0.10	0.02	0.00	0.00
Concrete Truck	1	Paved	29	16	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	5	Paved	58	25	0.003	0.001	0.97	0.24	0.01	0.00
<b>Offsite Total</b>							<b>1.35</b>	<b>0.33</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>1.35</b>	<b>0.33</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 104**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Underground Conduit & Structures**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	20	178	1.00E-03	1.52E-04	0.02	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 1,600 ft. long x 1 ft. wide x 3 ft. deep over 9 days

**Table 105**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Restoration**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.09	2.14	0.77	0.00	0.07	0.01	433.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.64	0.40	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.14</b>	<b>0.77</b>	<b>0.00</b>	<b>1.71</b>	<b>0.42</b>	<b>433.9</b>
<b>Total</b>	<b>0.09</b>	<b>2.14</b>	<b>0.77</b>	<b>0.00</b>	<b>1.71</b>	<b>0.42</b>	<b>433.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	3.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>3.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>3.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None	200	1	9	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0

**Table 105**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Restoration**

<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab, 4x4	2	17	N/A	29
Water Truck	1	17	N/A	29
Worker Commute	7	17	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 105**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Restoration**

<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	43.43	0.00	0.00	43.95
Water Truck	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
Worker Commute	0.07	2.04	0.22	0.00	0.04	0.00	283.01	0.02	0.01	286.24
<b>Offsite Total</b>	<b>0.09</b>	<b>2.14</b>	<b>0.77</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>429.11</b>	<b>0.02</b>	<b>0.01</b>	<b>433.95</b>
<b>Total</b>	<b>0.09</b>	<b>2.14</b>	<b>0.77</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>429.11</b>	<b>0.02</b>	<b>0.01</b>	<b>433.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.37
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.00	0.88
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.41	0.00	0.00	2.43
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.65</b>	<b>0.00</b>	<b>0.00</b>	<b>3.69</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.65</b>	<b>0.00</b>	<b>0.00</b>	<b>3.69</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	2	Paved	29	17	0.003	0.001	0.19	0.05	0.00	0.00
Water Truck	1	Paved	29	17	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	7	Paved	58	17	0.003	0.001	1.35	0.33	0.01	0.00
<b>Offsite Total</b>							<b>1.64</b>	<b>0.40</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>1.64</b>	<b>0.40</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 105**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Gale to Pisgah Fiber Optic Cable - Restoration**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 106**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Construct Coolwater Microwave Tower**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.79	14.31	27.06	0.08	0.94	0.86	7,144.5
Onsite Motor Vehicle Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	8.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.79</b>	<b>14.32</b>	<b>27.10</b>	<b>0.08</b>	<b>0.95</b>	<b>0.87</b>	<b>7152.8</b>
Offsite Motor Vehicle Exhaust	0.07	1.34	1.12	0.00	0.06	0.02	378.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.97	0.24	
<b>Offsite Total</b>	<b>0.07</b>	<b>1.34</b>	<b>1.12</b>	<b>0.00</b>	<b>1.03</b>	<b>0.26</b>	<b>378.2</b>
<b>Total</b>	<b>3.86</b>	<b>15.65</b>	<b>28.22</b>	<b>0.08</b>	<b>1.98</b>	<b>1.12</b>	<b>7531.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.05	0.09	0.00	0.00	0.00	23.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.5</b>
Offsite Motor Vehicle Exhaust	0.00	0.03	0.00	0.00	0.00	0.00	4.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>4.3</b>
<b>Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.09</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>27.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Crane	300	1	8	6
Drill Rig	350	1	7	6
Concrete Pump	350	1	2	6
Forklift	300	1	10	4
Backhoe/Front Loader	300	1	10	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Drill Rig	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Concrete Pump	350	0.157	0.667	1.801	0.003	0.054	0.050	344.895	0.014	0.009	Pumps
Forklift	300	0.069	0.215	0.451	0.001	0.016	0.015	110.880	0.006	0.003	Forklifts
Backhoe/Front Loader	300	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**



**Table 106**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Construct Coolwater Microwave Tower**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
Drill Rig	0.62	3.30	3.75	0.02	0.11	0.10	1866.17	0.06	0.05	1,882.3
Concrete Pump	1.19	4.17	8.44	0.02	0.30	0.27	2067.26	0.11	0.05	2,086.1
Forklift	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Backhoe/Front Loader	1.19	4.17	8.44	0.02	0.30	0.27	2067.26	0.11	0.05	2,086.1
<b>Total</b>	<b>3.79</b>	<b>14.31</b>	<b>27.06</b>	<b>0.08</b>	<b>0.94</b>	<b>0.86</b>	<b>7080.34</b>	<b>0.34</b>	<b>0.18</b>	<b>7144.48</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Crane	0.00	0.01	0.03	0.00	0.00	0.00	4.32	0.00	0.00	4.4
Drill Rig	0.00	0.01	0.01	0.00	0.00	0.00	6.53	0.00	0.00	6.6
Concrete Pump	0.00	0.00	0.01	0.00	0.00	0.00	2.07	0.00	0.00	2.1
Forklift	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Backhoe/Front Loader	0.01	0.02	0.04	0.00	0.00	0.00	10.34	0.00	0.00	10.4
<b>Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.25</b>	<b>0.00</b>	<b>0.00</b>	<b>23.46</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
3/4-Ton Pick-up Truck, 4x4	2	40	N/A	0.5
Flatbed Truck	2	7	N/A	0.5
Dump Truck	1	7	N/A	0.5
2 Ton Truck	1	15	N/A	0.5
Concrete Truck	1	2	N/A	0.5
<b>Offsite</b>				
Concrete Truck	1	2	N/A	60
Worker Commute	4	50	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Flatbed Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 106**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Construct Coolwater Microwave Tower**

2 Ton Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
<b>Offsite</b>										
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Flatbed Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Dump Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
2 Ton Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.20</b>	<b>0.00</b>	<b>0.00</b>	<b>8.29</b>
<b>Offsite</b>										
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.07</b>	<b>1.34</b>	<b>1.12</b>	<b>0.00</b>	<b>0.06</b>	<b>0.02</b>	<b>374.13</b>	<b>0.01</b>	<b>0.01</b>	<b>378.25</b>
<b>Total</b>	<b>0.07</b>	<b>1.34</b>	<b>1.16</b>	<b>0.00</b>	<b>0.06</b>	<b>0.02</b>	<b>382.34</b>	<b>0.01</b>	<b>0.01</b>	<b>386.54</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
Flatbed Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
2 Ton Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>
<b>Offsite</b>										
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	4.04	0.00	0.00	4.09
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.26</b>	<b>0.00</b>	<b>0.00</b>	<b>4.30</b>
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.29</b>	<b>0.00</b>	<b>0.00</b>	<b>4.34</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 106**  
**Telecommunications Construction Emissions - Controlled Fugitive PM**  
**Construct Coolwater Microwave Tower**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
3/4-Ton Pick-up Truck, 4x4	2	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
Flatbed Truck	2	Paved	0.5	7	0.003	0.001	0.00	0.00	0.00	0.00
Dump Truck	1	Paved	0.5	7	0.003	0.001	0.00	0.00	0.00	0.00
2 Ton Truck	1	Paved	0.5	15	0.003	0.001	0.00	0.00	0.00	0.00
Concrete Truck	1	Paved	0.5	2	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Concrete Truck	1	Paved	60	2	0.003	0.001	0.20	0.05	0.00	0.00
Worker Commute	4	Paved	58	50	0.003	0.001	0.77	0.19	0.02	0.00
<b>Offsite Total</b>							<b>0.97</b>	<b>0.24</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>0.98</b>	<b>0.24</b>	<b>0.02</b>	<b>0.00</b>

a From Table 112

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 107**  
**Distribution for Station Light & Power Construction Emissions - Controlled Fugitive PM**  
**Overhead Construction**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.58	7.68	13.85	0.04	0.41	0.38	4,226.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.58</b>	<b>7.68</b>	<b>13.85</b>	<b>0.04</b>	<b>0.41</b>	<b>0.38</b>	<b>4226.2</b>
Offsite Motor Vehicle Exhaust	0.05	1.46	0.19	0.00	0.03	0.00	211.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	6.83	0.82	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.46</b>	<b>0.19</b>	<b>0.00</b>	<b>6.86</b>	<b>0.83</b>	<b>211.0</b>
<b>Total</b>	<b>1.64</b>	<b>9.14</b>	<b>14.04</b>	<b>0.04</b>	<b>7.27</b>	<b>1.20</b>	<b>4437.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.02	0.04	0.00	0.00	0.00	12.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.04</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>13.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	1	6	8
60' Digger Derrick	350	1	6	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
60' Digger Derrick	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	0.76	3.28	8.86	0.02	0.26	0.24	1701.32	0.07	0.04	1,716.4
60' Digger Derrick	0.83	4.40	5.00	0.02	0.15	0.14	2488.23	0.07	0.06	2,509.8
<b>Total</b>	<b>1.58</b>	<b>7.68</b>	<b>13.85</b>	<b>0.04</b>	<b>0.41</b>	<b>0.38</b>	<b>4189.55</b>	<b>0.14</b>	<b>0.11</b>	<b>4226.22</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

**Table 107**  
**Distribution for Station Light & Power Construction Emissions - Controlled Fugitive PM**  
**Overhead Construction**

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.00	0.01	0.03	0.00	0.00	0.00	5.10	0.00	0.00	5.1
60' Digger Derrick	0.00	0.01	0.01	0.00	0.00	0.00	7.46	0.00	0.00	7.5
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.57</b>	<b>0.00</b>	<b>0.00</b>	<b>12.68</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	6	N/A	1.5
Flat Bed Truck w/Derrick	1	6	N/A	1.5
Worker Commute	5	6	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	MDV Diesel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Flat Bed Truck w/Derrick	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Flat Bed Truck w/Derrick	0.00	0.00	0.02	0.00	0.00	0.00	5.31	0.00	0.00	5.37
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.05</b>	<b>1.46</b>	<b>0.19</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>208.58</b>	<b>0.01</b>	<b>0.01</b>	<b>210.96</b>

**Table 107**  
**Distribution for Station Light & Power Construction Emissions - Controlled Fugitive PM**  
**Overhead Construction**

<b>Total</b>	<b>0.05</b>	<b>1.46</b>	<b>0.19</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>208.58</b>	<b>0.01</b>	<b>0.01</b>	<b>210.96</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	---------------	-------------	-------------	---------------

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flat Bed Truck w/Derrick	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Paved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	6	0.564	0.056	0.85	0.08	0.00	0.00
Flat Bed Truck w/Derrick	1	Unpaved	1.5	6	0.977	0.098	1.47	0.15	0.00	0.00
Worker Commute	5	Unpaved	1.5	6	0.474	0.047	3.55	0.36	0.01	0.00
Worker Commute	5	Paved	58	6	0.003	0.001	0.97	0.24	0.00	0.00
<b>Offsite Total</b>							<b>6.83</b>	<b>0.82</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>6.83</b>	<b>0.82</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00

**Table 107**  
**Distribution for Station Light & Power Construction Emissions - Controlled Fugitive PM**  
**Overhead Construction**

Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 108**  
**Distribution for Station Light & Power Construction Emissions - Controlled Fugitive PM**  
**Underground Civil Construction**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.58	9.46	19.58	0.05	0.68	0.62	4,831.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.58</b>	<b>9.46</b>	<b>19.58</b>	<b>0.05</b>	<b>0.68</b>	<b>0.62</b>	<b>4831.8</b>
Offsite Motor Vehicle Exhaust	0.10	1.80	2.15	0.01	0.10	0.04	635.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	8.69	1.07	
<b>Offsite Total</b>	<b>0.10</b>	<b>1.80</b>	<b>2.15</b>	<b>0.01</b>	<b>8.78</b>	<b>1.10</b>	<b>635.0</b>
<b>Total</b>	<b>2.68</b>	<b>11.26</b>	<b>21.73</b>	<b>0.06</b>	<b>9.46</b>	<b>1.73</b>	<b>5466.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	10.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.4</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>1.5</b>
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.05</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>11.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	300	1	6	8
Hydraulic Rewind Puller	300	1	2	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	300	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes
Hydraulic Rewind Puller	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	1.59	5.57	11.26	0.03	0.40	0.36	2756.35	0.14	0.07	2,781.5
Hydraulic Rewind Puller	0.99	3.89	8.32	0.02	0.28	0.26	2032.08	0.09	0.05	2,050.3
<b>Total</b>	<b>2.58</b>	<b>9.46</b>	<b>19.58</b>	<b>0.05</b>	<b>0.68</b>	<b>0.62</b>	<b>4788.43</b>	<b>0.23</b>	<b>0.12</b>	<b>4831.83</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions



**Table 108**  
**Distribution for Station Light & Power Construction Emissions - Controlled Fugitive PM**  
**Underground Civil Construction**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.02	0.03	0.00	0.00	0.00	8.27	0.00	0.00	8.3
Hydraulic Rewind Puller	0.00	0.00	0.01	0.00	0.00	0.00	2.03	0.00	0.00	2.1
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.30</b>	<b>0.00</b>	<b>0.00</b>	<b>10.39</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab, 4x4	1	6	N/A	1.5
Concrete Truck	1	6	N/A	60
Structure Delivery Truck	1	2	N/A	60
Worker Commute	5	6	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	MDV Diesel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Structure Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Structure Delivery Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45

**Table 108**  
**Distribution for Station Light & Power Construction Emissions - Controlled Fugitive PM**  
**Underground Civil Construction**

<b>Offsite Total</b>	<b>0.10</b>	<b>1.80</b>	<b>2.15</b>	<b>0.01</b>	<b>0.10</b>	<b>0.04</b>	<b>628.10</b>	<b>0.01</b>	<b>0.02</b>	<b>634.96</b>
<b>Total</b>	<b>0.10</b>	<b>1.80</b>	<b>2.15</b>	<b>0.01</b>	<b>0.10</b>	<b>0.04</b>	<b>628.10</b>	<b>0.01</b>	<b>0.02</b>	<b>634.96</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Structure Delivery Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.46</b>	<b>0.00</b>	<b>0.00</b>	<b>1.48</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.46</b>	<b>0.00</b>	<b>0.00</b>	<b>1.48</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Paved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	1	Unpaved	1.5	6	0.564	0.056	0.85	0.08	0.00	0.00
Concrete Truck	1	Unpaved	1.5	6	0.977	0.098	1.47	0.15	0.00	0.00
Concrete Truck	1	Paved	58.5	6	0.003	0.001	0.19	0.05	0.00	0.00
Structure Delivery Truck	1	Unpaved	1.5	2	0.977	0.098	1.47	0.15	0.00	0.00
Structure Delivery Truck	1	Paved	58.5	2	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Unpaved	1.5	6	0.474	0.047	3.55	0.36	0.01	0.00
Worker Commute	5	Paved	58	6	0.003	0.001	0.97	0.24	0.00	0.00
<b>Offsite Total</b>							<b>8.69</b>	<b>1.07</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>8.69</b>	<b>1.07</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 108**  
**Distribution for Station Light & Power Construction Emissions - Controlled Fugitive PM**  
**Underground Civil Construction**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 109**  
**Distribution for Station Light & Power Construction Emissions - Controlled Fugitive PM**  
**Underground Electrical Construction**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.12	7.08	17.14	0.03	0.62	0.57	2,906.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.12</b>	<b>7.08</b>	<b>17.14</b>	<b>0.03</b>	<b>0.62</b>	<b>0.57</b>	<b>2906.2</b>
Offsite Motor Vehicle Exhaust	0.05	1.47	0.21	0.00	0.03	0.00	216.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	8.30	0.97	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.47</b>	<b>0.21</b>	<b>0.00</b>	<b>8.33</b>	<b>0.97</b>	<b>216.3</b>
<b>Total</b>	<b>2.17</b>	<b>8.55</b>	<b>17.35</b>	<b>0.03</b>	<b>8.95</b>	<b>1.54</b>	<b>3122.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	7.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.4</b>
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>7.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	1	4	8
Flat Bed Truck w/Derrick	350	1	6	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Flat Bed Truck w/Derrick	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 111

**Construction Equipment Daily Exhaust Emissions**

**Table 109**  
**Distribution for Station Light & Power Construction Emissions - Controlled Fugitive PM**  
**Underground Electrical Construction**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
Flat Bed Truck w/Derrick	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
<b>Total</b>	<b>2.12</b>	<b>7.08</b>	<b>17.14</b>	<b>0.03</b>	<b>0.62</b>	<b>0.57</b>	<b>2879.03</b>	<b>0.19</b>	<b>0.07</b>	<b>2906.24</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.00	0.01	0.02	0.00	0.00	0.00	2.88	0.00	0.00	2.9
Flat Bed Truck w/Derrick	0.00	0.01	0.03	0.00	0.00	0.00	4.32	0.00	0.00	4.4
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.20</b>	<b>0.00</b>	<b>0.00</b>	<b>7.27</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab, 4x4	1	4	N/A	1.5
Bucket Truck	1	4	N/A	1.5
Flat Bed Truck w/Derrick	1	4	N/A	1.5
Worker Commute	5	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	MDV Diesel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck w/Derrick	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

**Table 109**  
**Distribution for Station Light & Power Construction Emissions - Controlled Fugitive PM**  
**Underground Electrical Construction**

a From Table 113 or Table 114

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Bucket Truck	0.00	0.00	0.02	0.00	0.00	0.00	5.31	0.00	0.00	5.37
Flat Bed Truck w/Derrick	0.00	0.00	0.02	0.00	0.00	0.00	5.31	0.00	0.00	5.37
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.05</b>	<b>1.47</b>	<b>0.21</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>213.89</b>	<b>0.01</b>	<b>0.01</b>	<b>216.32</b>
<b>Total</b>	<b>0.05</b>	<b>1.47</b>	<b>0.21</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>213.89</b>	<b>0.01</b>	<b>0.01</b>	<b>216.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Flat Bed Truck w/Derrick	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.41
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.43</b>	<b>0.00</b>	<b>0.00</b>	<b>0.43</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.43</b>	<b>0.00</b>	<b>0.00</b>	<b>0.43</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Paved	0	0	0.000	0.000	0.00	0.00	0.00	0.00

**Table 109**  
**Distribution for Station Light & Power Construction Emissions - Controlled Fugitive PM**  
**Underground Electrical Construction**

<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	1	Unpaved	1.5	4	0.564	0.056	0.85	0.08	0.00	0.00
Bucket Truck	1	Unpaved	1.5	4	0.977	0.098	1.47	0.15	0.00	0.00
Flat Bed Truck w/Derrick	1	Unpaved	1.5	4	0.977	0.098	1.47	0.15	0.00	0.00
Worker Commute	5	Unpaved	1.5	4	0.474	0.047	3.55	0.36	0.01	0.00
Worker Commute	5	Paved	58	4	0.003	0.001	0.97	0.24	0.00	0.00
<b>Offsite Total</b>							<b>8.30</b>	<b>0.97</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>8.30</b>	<b>0.97</b>	<b>0.02</b>	<b>0.00</b>

a From Table 112

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			1.00E-03	1.52E-04	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			1.735	0.775	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 115

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 110**

**Motor Vehicle Travel Distances**

**Estimate of Unpaved Travel Distance for Transmission Line Segments**

67.4	Total Mileage of Transmission Line
4	Number of Major Segments
17	Average Length of Major Segments
8.5	One-Way Distance to Middle of Segment

**Estimate of One-Way Paved Travel from Staging Yard to Transmission Line Unpaved Travel Segment**

5	Estimate of One-Way Paved Travel from Staging Yard to Transmission Line Unpaved Travel Segment
---	--

**Estimate of Paved Travel Distance for Workers**

29.5	Distance from Hesperia to North Side Road and Rt. 247
28	Distance from Barstow to North Side Road and Rt. 247
29	Average Distance for worker travel (one way)

**Estimate of On-Site Travel Distance for Substation Construction**

4	10 lengthwise passes (approx 2000 ft each)
---	--



**Table 111**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016											
Air Basin		MD									
Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
Aerial Lifts	15	0.0101	0.0528	0.0630	0.0001	0.0025	0.0023	8.6	0.0009	0.0002	0.39
	25	0.0150	0.0479	0.0887	0.0001	0.0043	0.0040	11.0	0.0014	0.0003	0.50
	50	0.0433	0.1594	0.1635	0.0003	0.0117	0.0107	19.6	0.0039	0.0005	0.90
	120	0.0416	0.2355	0.3027	0.0004	0.0220	0.0202	38.0	0.0037	0.0010	1.74
	500	0.0949	0.4096	1.1069	0.0021	0.0329	0.0303	212.7	0.0086	0.0055	9.62
	750	0.1769	0.7405	2.0785	0.0039	0.0608	0.0559	384.4	0.0160	0.0100	17.39
Air Compressors	15	0.0104	0.0461	0.0643	0.0001	0.0037	0.0034	7.2	0.0009	0.0002	0.33
	25	0.0219	0.0665	0.1225	0.0002	0.0066	0.0060	14.4	0.0020	0.0004	0.66
	50	0.0674	0.2287	0.1980	0.0003	0.0166	0.0153	22.3	0.0061	0.0006	1.03
	120	0.0630	0.3150	0.4008	0.0006	0.0336	0.0309	46.9	0.0057	0.0012	2.15
	175	0.0829	0.5003	0.6409	0.0010	0.0347	0.0320	88.4	0.0075	0.0023	4.03
	250	0.0839	0.2740	0.8339	0.0015	0.0256	0.0236	131.1	0.0076	0.0034	5.94
	500	0.1387	0.4733	1.2758	0.0023	0.0421	0.0387	231.5	0.0125	0.0060	10.48
	750	0.2164	0.7314	2.0513	0.0036	0.0667	0.0613	357.8	0.0195	0.0093	16.20
Bore/Drill Rigs	15	0.0120	0.0631	0.0753	0.0002	0.0029	0.0027	10.3	0.0011	0.0003	0.47
	25	0.0193	0.0658	0.1218	0.0002	0.0046	0.0042	16.0	0.0017	0.0004	0.73
	50	0.0220	0.2221	0.2104	0.0004	0.0058	0.0053	31.0	0.0020	0.0008	1.42
	120	0.0349	0.4666	0.3305	0.0009	0.0125	0.0115	77.1	0.0031	0.0020	3.51
	175	0.0565	0.7533	0.4371	0.0016	0.0156	0.0143	140.9	0.0051	0.0037	6.41
	250	0.0627	0.3422	0.3883	0.0021	0.0113	0.0104	187.9	0.0057	0.0049	8.50
	500	0.1032	0.5506	0.6246	0.0031	0.0186	0.0171	311.0	0.0093	0.0081	14.06
	750	0.2042	1.0879	1.2417	0.0062	0.0369	0.0339	614.5	0.0184	0.0159	27.78
Cement and Mortar Mixers	15	0.0074	0.0386	0.0461	0.0001	0.0019	0.0017	6.3	0.0007	0.0002	0.29
	25	0.0243	0.0771	0.1431	0.0002	0.0070	0.0065	17.5	0.0022	0.0005	0.80
Concrete/Industrial Saws	25	0.0199	0.0678	0.1255	0.0002	0.0047	0.0043	16.5	0.0018	0.0004	0.75
	50	0.0702	0.2670	0.2559	0.0004	0.0186	0.0171	30.2	0.0063	0.0008	1.39
	120	0.0807	0.4720	0.5776	0.0009	0.0435	0.0400	74.1	0.0073	0.0019	3.38
	175	0.1224	0.8659	1.0439	0.0018	0.0524	0.0482	160.1	0.0110	0.0042	7.29
Cranes	50	0.0777	0.2653	0.2157	0.0003	0.0184	0.0170	23.2	0.0070	0.0006	1.08
	120	0.0743	0.3530	0.4471	0.0006	0.0377	0.0347	50.1	0.0067	0.0013	2.29
	175	0.0861	0.4779	0.6091	0.0009	0.0345	0.0318	80.3	0.0078	0.0021	3.66
	250	0.0875	0.2631	0.7524	0.0013	0.0259	0.0238	112.1	0.0079	0.0029	5.08
	500	0.1324	0.4428	1.0711	0.0018	0.0387	0.0356	179.9	0.0119	0.0047	8.16
	750	0.2240	0.7451	1.8538	0.0030	0.0661	0.0608	302.8	0.0202	0.0079	13.73
	9999	0.8238	2.7044	8.7440	0.0098	0.2551	0.2347	969.7	0.0743	0.0252	44.01
Crawler Tractors	50	0.0943	0.3011	0.2384	0.0003	0.0214	0.0197	24.9	0.0085	0.0007	1.16
	120	0.1072	0.4734	0.6371	0.0008	0.0532	0.0489	65.8	0.0097	0.0017	3.01

**Table 111**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016											
Air Basin		MD									
Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
	175	0.1425	0.7354	1.0083	0.0014	0.0566	0.0521	121.1	0.0129	0.0032	5.53
	250	0.1494	0.4449	1.2413	0.0019	0.0468	0.0430	166.0	0.0135	0.0043	7.53
	500	0.2181	0.7898	1.7418	0.0025	0.0668	0.0615	259.0	0.0197	0.0067	11.76
	750	0.3925	1.4158	3.1882	0.0047	0.1211	0.1114	464.3	0.0354	0.0121	21.08
	1000	0.5965	2.2357	6.3162	0.0066	0.1927	0.1773	657.5	0.0538	0.0171	29.87
Crushing/Proc. Equipment	50	0.1232	0.4488	0.3873	0.0006	0.0309	0.0284	44.0	0.0111	0.0012	2.03
	120	0.1052	0.5588	0.6766	0.0010	0.0554	0.0510	83.1	0.0095	0.0022	3.80
	175	0.1510	0.9530	1.1412	0.0019	0.0619	0.0570	167.1	0.0136	0.0044	7.62
	250	0.1551	0.5067	1.4525	0.0027	0.0453	0.0417	244.3	0.0140	0.0063	11.07
	500	0.2238	0.7534	1.9232	0.0037	0.0647	0.0595	373.3	0.0202	0.0097	16.90
	750	0.3515	1.1810	3.1224	0.0059	0.1027	0.0945	588.3	0.0317	0.0153	26.64
	9999	0.9136	2.9321	10.8003	0.0131	0.2933	0.2699	1306.6	0.0824	0.0339	59.21
Dumpers/Tenders	25	0.0093	0.0314	0.0587	0.0001	0.0024	0.0022	7.6	0.0008	0.0002	0.35
Excavators	25	0.0198	0.0676	0.1252	0.0002	0.0047	0.0043	16.4	0.0018	0.0004	0.75
	50	0.0580	0.2619	0.2164	0.0003	0.0147	0.0135	25.0	0.0052	0.0007	1.15
	120	0.0832	0.5065	0.5286	0.0009	0.0394	0.0363	73.6	0.0075	0.0019	3.36
	175	0.0971	0.6642	0.6554	0.0013	0.0354	0.0326	112.1	0.0088	0.0029	5.11
	250	0.1053	0.3386	0.7851	0.0018	0.0262	0.0241	158.5	0.0095	0.0041	7.18
	500	0.1494	0.4846	1.0223	0.0023	0.0366	0.0336	233.5	0.0135	0.0061	10.58
	750	0.2488	0.8033	1.7451	0.0039	0.0616	0.0567	387.1	0.0225	0.0100	17.53
Forklifts	50	0.0284	0.1484	0.1270	0.0002	0.0079	0.0073	14.7	0.0026	0.0004	0.68
	120	0.0312	0.2129	0.2110	0.0004	0.0148	0.0137	31.2	0.0028	0.0008	1.43
	175	0.0452	0.3313	0.3042	0.0006	0.0165	0.0152	56.0	0.0041	0.0015	2.55
	250	0.0489	0.1569	0.3511	0.0009	0.0116	0.0107	77.1	0.0044	0.0020	3.49
	500	0.0687	0.2146	0.4506	0.0011	0.0163	0.0150	110.9	0.0062	0.0029	5.02
Generator Sets	15	0.0130	0.0651	0.0900	0.0002	0.0048	0.0044	10.2	0.0012	0.0003	0.47
	25	0.0241	0.0811	0.1495	0.0002	0.0077	0.0070	17.6	0.0022	0.0005	0.80
	50	0.0637	0.2398	0.2530	0.0004	0.0175	0.0161	30.6	0.0057	0.0008	1.41
	120	0.0822	0.4767	0.6120	0.0009	0.0434	0.0399	77.9	0.0074	0.0020	3.56
	175	0.1013	0.7331	0.9458	0.0016	0.0434	0.0399	141.9	0.0091	0.0037	6.46
	250	0.1006	0.4058	1.2378	0.0024	0.0342	0.0314	212.3	0.0091	0.0055	9.61
	500	0.1438	0.6410	1.7347	0.0033	0.0507	0.0467	336.6	0.0130	0.0087	15.23
	750	0.2402	1.0347	2.9072	0.0055	0.0837	0.0770	543.3	0.0217	0.0141	24.58
	9999	0.6073	2.2406	8.4553	0.0105	0.2116	0.1947	1047.7	0.0548	0.0272	47.44
Graders	50	0.0815	0.2999	0.2473	0.0004	0.0196	0.0180	27.5	0.0074	0.0007	1.28
	120	0.1001	0.5191	0.6212	0.0009	0.0498	0.0459	74.9	0.0090	0.0020	3.43
	175	0.1213	0.7303	0.8612	0.0014	0.0475	0.0437	123.8	0.0109	0.0032	5.65
	250	0.1249	0.3933	1.0428	0.0019	0.0358	0.0329	172.0	0.0113	0.0045	7.79
	500	0.1577	0.5520	1.2378	0.0023	0.0445	0.0410	229.3	0.0142	0.0060	10.39

**Table 111**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016											
Air Basin		MD									
Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
Off-Highway Tractors	750	0.3354	1.1685	2.6888	0.0049	0.0956	0.0880	485.3	0.0303	0.0126	22.00
	120	0.1804	0.6982	1.0539	0.0011	0.0891	0.0820	93.7	0.0163	0.0025	4.30
	175	0.1780	0.8159	1.2809	0.0015	0.0722	0.0664	130.3	0.0161	0.0034	5.96
	250	0.1414	0.4152	1.1789	0.0015	0.0482	0.0443	130.3	0.0128	0.0034	5.92
	750	0.5700	2.3652	4.7352	0.0057	0.1902	0.1750	567.6	0.0514	0.0148	25.83
Off-Highway Trucks	1000	0.8608	3.7053	8.7994	0.0082	0.2874	0.2644	813.6	0.0777	0.0212	37.05
	175	0.1162	0.7545	0.7637	0.0014	0.0417	0.0383	125.0	0.0105	0.0033	5.70
	250	0.1178	0.3648	0.8666	0.0019	0.0290	0.0267	166.4	0.0106	0.0043	7.54
	500	0.1854	0.5791	1.2508	0.0027	0.0448	0.0412	272.1	0.0167	0.0071	12.33
	750	0.3021	0.9393	2.0910	0.0044	0.0738	0.0679	441.3	0.0273	0.0115	19.99
Other Construction Equipment	1000	0.4570	1.4115	4.8811	0.0063	0.1357	0.1248	624.2	0.0412	0.0162	28.29
	15	0.0118	0.0617	0.0736	0.0002	0.0029	0.0026	10.1	0.0011	0.0003	0.46
	25	0.0159	0.0544	0.1007	0.0002	0.0038	0.0035	13.2	0.0014	0.0003	0.60
	50	0.0529	0.2444	0.2272	0.0004	0.0143	0.0131	28.0	0.0048	0.0007	1.29
	120	0.0745	0.5165	0.5488	0.0009	0.0383	0.0353	80.8	0.0067	0.0021	3.69
Other General Industrial Equipmen	175	0.0727	0.5856	0.5848	0.0012	0.0290	0.0267	106.4	0.0066	0.0028	4.85
	500	0.1242	0.4864	1.0402	0.0025	0.0350	0.0322	254.0	0.0112	0.0066	11.49
	15	0.0066	0.0390	0.0466	0.0001	0.0018	0.0017	6.4	0.0006	0.0002	0.29
	25	0.0185	0.0631	0.1169	0.0002	0.0044	0.0040	15.3	0.0017	0.0004	0.70
	50	0.0704	0.2449	0.1999	0.0003	0.0171	0.0158	21.7	0.0064	0.0006	1.01
Other Material Handling Equipment	120	0.0900	0.4340	0.5404	0.0007	0.0463	0.0426	62.0	0.0081	0.0016	2.84
	175	0.0995	0.5662	0.7079	0.0011	0.0398	0.0366	95.8	0.0090	0.0025	4.37
	250	0.0987	0.2944	0.8771	0.0015	0.0278	0.0256	135.5	0.0089	0.0035	6.14
	500	0.1824	0.5588	1.4858	0.0026	0.0507	0.0466	265.2	0.0165	0.0069	12.01
	750	0.3031	0.9210	2.5481	0.0044	0.0855	0.0787	437.1	0.0273	0.0113	19.80
	1000	0.4268	1.3208	4.9252	0.0056	0.1383	0.1272	559.1	0.0385	0.0145	25.35
	50	0.0977	0.3384	0.2779	0.0004	0.0238	0.0219	30.3	0.0088	0.0008	1.41
	120	0.0874	0.4225	0.5278	0.0007	0.0452	0.0416	60.6	0.0079	0.0016	2.78
Pavers	175	0.1253	0.7172	0.8995	0.0014	0.0504	0.0464	122.0	0.0113	0.0032	5.57
	250	0.1042	0.3135	0.9371	0.0016	0.0296	0.0273	144.9	0.0094	0.0038	6.57
	500	0.1300	0.4021	1.0713	0.0019	0.0365	0.0336	191.5	0.0117	0.0050	8.67
	9999	0.5858	1.7445	6.5141	0.0073	0.1824	0.1678	740.7	0.0529	0.0192	33.58
	25	0.0230	0.0774	0.1446	0.0002	0.0061	0.0056	18.6	0.0021	0.0005	0.85
Paving Equipment	50	0.1116	0.3335	0.2691	0.0004	0.0252	0.0232	28.0	0.0101	0.0007	1.30
	120	0.1162	0.4925	0.7022	0.0008	0.0590	0.0543	69.1	0.0105	0.0018	3.17
	175	0.1522	0.7671	1.1259	0.0014	0.0626	0.0576	128.2	0.0137	0.0034	5.85
	250	0.1757	0.5365	1.5465	0.0022	0.0586	0.0539	194.2	0.0159	0.0051	8.81
	500	0.1954	0.7641	1.6700	0.0023	0.0640	0.0589	233.0	0.0176	0.0061	10.58
Paving Equipment	25	0.0152	0.0519	0.0962	0.0002	0.0036	0.0034	12.6	0.0014	0.0003	0.57

**Table 111**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016											
Air Basin		MD									
Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
	50	0.0951	0.2826	0.2295	0.0003	0.0215	0.0198	23.9	0.0086	0.0006	1.11
	120	0.0911	0.3858	0.5516	0.0006	0.0467	0.0429	54.5	0.0082	0.0014	2.50
	175	0.1187	0.5999	0.8845	0.0011	0.0491	0.0452	100.9	0.0107	0.0026	4.61
	250	0.1076	0.3300	0.9691	0.0014	0.0360	0.0331	122.2	0.0097	0.0032	5.54
Plate Compactors	15	0.0050	0.0263	0.0314	0.0001	0.0012	0.0011	4.3	0.0005	0.0001	0.20
Pressure Washers	15	0.0062	0.0312	0.0431	0.0001	0.0023	0.0021	4.9	0.0006	0.0001	0.22
	25	0.0098	0.0329	0.0606	0.0001	0.0031	0.0029	7.1	0.0009	0.0002	0.33
	50	0.0224	0.0945	0.1138	0.0002	0.0069	0.0063	14.3	0.0020	0.0004	0.65
	120	0.0219	0.1404	0.1803	0.0003	0.0114	0.0105	24.1	0.0020	0.0006	1.10
Pumps	15	0.0106	0.0474	0.0661	0.0001	0.0038	0.0035	7.4	0.0010	0.0002	0.34
	25	0.0296	0.0896	0.1653	0.0002	0.0089	0.0081	19.5	0.0027	0.0005	0.89
	50	0.0773	0.2830	0.2871	0.0004	0.0207	0.0190	34.3	0.0070	0.0009	1.58
	120	0.0859	0.4842	0.6215	0.0009	0.0456	0.0419	77.9	0.0078	0.0020	3.56
	175	0.1051	0.7345	0.9483	0.0016	0.0450	0.0414	140.0	0.0095	0.0037	6.38
	250	0.1008	0.3910	1.1926	0.0023	0.0337	0.0310	201.2	0.0091	0.0052	9.10
	500	0.1567	0.6671	1.8006	0.0034	0.0540	0.0497	344.9	0.0141	0.0089	15.61
	750	0.2666	1.1029	3.0910	0.0057	0.0913	0.0840	570.2	0.0241	0.0148	25.80
	9999	0.8122	2.9422	11.0546	0.0136	0.2800	0.2576	1353.6	0.0733	0.0351	61.31
Rollers	15	0.0074	0.0386	0.0460	0.0001	0.0018	0.0017	6.3	0.0007	0.0002	0.29
	25	0.0161	0.0549	0.1016	0.0002	0.0038	0.0035	13.3	0.0015	0.0003	0.61
	50	0.0797	0.2677	0.2321	0.0003	0.0191	0.0176	26.0	0.0072	0.0007	1.20
	120	0.0794	0.3967	0.5105	0.0007	0.0415	0.0382	58.9	0.0072	0.0015	2.70
	175	0.1031	0.6146	0.7957	0.0012	0.0431	0.0396	108.0	0.0093	0.0028	4.93
	250	0.1041	0.3461	0.9947	0.0017	0.0333	0.0306	153.0	0.0094	0.0040	6.93
	500	0.1390	0.5316	1.2651	0.0021	0.0442	0.0406	218.9	0.0125	0.0057	9.92
Rough Terrain Forklifts	50	0.0838	0.3456	0.2951	0.0004	0.0216	0.0199	33.8	0.0076	0.0009	1.56
	120	0.0728	0.4227	0.4736	0.0007	0.0368	0.0339	62.4	0.0066	0.0016	2.85
	175	0.1079	0.7230	0.7786	0.0014	0.0422	0.0388	124.8	0.0097	0.0033	5.69
	250	0.1106	0.3588	0.9194	0.0019	0.0302	0.0278	170.6	0.0100	0.0044	7.73
	500	0.1588	0.5200	1.2074	0.0025	0.0427	0.0393	256.3	0.0143	0.0067	11.61
Rubber Tired Dozers	175	0.1849	0.8272	1.3057	0.0015	0.0739	0.0680	129.4	0.0167	0.0034	5.92
	250	0.2097	0.6062	1.7064	0.0021	0.0706	0.0650	183.3	0.0189	0.0048	8.34
	500	0.2792	1.1673	2.2363	0.0026	0.0915	0.0841	264.6	0.0252	0.0069	12.05
	750	0.4216	1.7575	3.4223	0.0040	0.1388	0.1277	398.4	0.0380	0.0104	18.14
	1000	0.6577	2.8383	6.5313	0.0059	0.2168	0.1995	591.4	0.0593	0.0154	26.95
Rubber Tired Loaders	25	0.0204	0.0696	0.1289	0.0002	0.0048	0.0044	16.9	0.0018	0.0004	0.77
	50	0.0900	0.3346	0.2780	0.0004	0.0218	0.0200	31.1	0.0081	0.0008	1.44
	120	0.0771	0.4059	0.4822	0.0007	0.0386	0.0355	58.9	0.0070	0.0015	2.69
	175	0.1021	0.6236	0.7285	0.0012	0.0402	0.0369	106.2	0.0092	0.0028	4.85

**Table 111**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016											
Air Basin		MD									
Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
	250	0.1055	0.3354	0.8884	0.0017	0.0302	0.0278	148.8	0.0095	0.0039	6.75
	500	0.1591	0.5590	1.2560	0.0023	0.0449	0.0413	236.8	0.0144	0.0062	10.73
	750	0.3276	1.1451	2.6434	0.0049	0.0933	0.0859	485.1	0.0296	0.0126	21.98
	1000	0.4390	1.5579	4.9818	0.0060	0.1421	0.1307	593.3	0.0396	0.0154	26.91
Scrapers	120	0.1563	0.6768	0.9284	0.0011	0.0780	0.0718	93.8	0.0141	0.0025	4.30
	175	0.1768	0.8992	1.2602	0.0017	0.0708	0.0652	147.9	0.0160	0.0039	6.76
	250	0.1909	0.5685	1.6065	0.0024	0.0606	0.0558	209.3	0.0172	0.0054	9.50
	500	0.2734	1.0101	2.2158	0.0032	0.0850	0.0782	321.1	0.0247	0.0084	14.58
	750	0.4742	1.7450	3.9092	0.0056	0.1485	0.1366	554.8	0.0428	0.0144	25.19
Signal Boards	15	0.0072	0.0376	0.0449	0.0001	0.0018	0.0016	6.2	0.0006	0.0002	0.28
	50	0.0831	0.3131	0.3029	0.0005	0.0219	0.0201	36.2	0.0075	0.0010	1.67
	120	0.0871	0.5067	0.6223	0.0009	0.0466	0.0428	80.1	0.0079	0.0021	3.66
	175	0.1167	0.8280	1.0071	0.0017	0.0497	0.0457	154.4	0.0105	0.0040	7.03
	250	0.1317	0.4994	1.4456	0.0029	0.0424	0.0390	255.1	0.0119	0.0066	11.54
Skid Steer Loaders	25	0.0183	0.0593	0.1106	0.0002	0.0053	0.0049	13.8	0.0017	0.0004	0.63
	50	0.0323	0.2087	0.1951	0.0003	0.0094	0.0087	25.5	0.0029	0.0007	1.17
	120	0.0295	0.2693	0.2409	0.0005	0.0138	0.0127	42.7	0.0027	0.0011	1.95
Surfacing Equipment	50	0.0375	0.1299	0.1218	0.0002	0.0093	0.0085	14.1	0.0034	0.0004	0.65
	120	0.0778	0.4119	0.5357	0.0007	0.0402	0.0370	63.7	0.0070	0.0017	2.91
	175	0.0733	0.4690	0.6121	0.0010	0.0307	0.0283	85.7	0.0066	0.0022	3.91
	250	0.0832	0.3010	0.8495	0.0015	0.0280	0.0257	134.7	0.0075	0.0035	6.10
	500	0.1259	0.5481	1.2540	0.0022	0.0425	0.0391	221.0	0.0114	0.0057	10.01
	750	0.2001	0.8599	2.0162	0.0035	0.0675	0.0621	346.7	0.0181	0.0090	15.71
Sweepers/Scrubbers	15	0.0124	0.0728	0.0869	0.0002	0.0034	0.0031	11.9	0.0011	0.0003	0.54
	25	0.0236	0.0807	0.1494	0.0002	0.0056	0.0051	19.6	0.0021	0.0005	0.89
	50	0.0664	0.3077	0.2709	0.0004	0.0182	0.0167	31.5	0.0060	0.0008	1.45
	120	0.0774	0.5009	0.5315	0.0009	0.0391	0.0360	75.0	0.0070	0.0020	3.43
	175	0.1096	0.7990	0.7988	0.0016	0.0427	0.0393	138.9	0.0099	0.0036	6.33
	250	0.0972	0.3248	0.7925	0.0018	0.0255	0.0235	161.9	0.0088	0.0042	7.33
Tractors/Loaders/Backhoes	25	0.0192	0.0653	0.1215	0.0002	0.0048	0.0044	15.8	0.0017	0.0004	0.72
	50	0.0622	0.2946	0.2534	0.0004	0.0162	0.0149	30.3	0.0056	0.0008	1.40
	120	0.0524	0.3456	0.3522	0.0006	0.0253	0.0233	51.7	0.0047	0.0014	2.36
	175	0.0787	0.5844	0.5566	0.0011	0.0292	0.0269	101.3	0.0071	0.0026	4.62
	250	0.1024	0.3530	0.7902	0.0019	0.0260	0.0239	171.6	0.0092	0.0045	7.77
	500	0.1983	0.6958	1.4074	0.0039	0.0496	0.0456	344.5	0.0179	0.0089	15.60
	750	0.2988	1.0436	2.1713	0.0058	0.0755	0.0695	516.8	0.0270	0.0134	23.40
Trenchers	15	0.0098	0.0516	0.0616	0.0001	0.0024	0.0022	8.5	0.0009	0.0002	0.39
	25	0.0397	0.1354	0.2507	0.0004	0.0094	0.0086	32.9	0.0036	0.0009	1.50
	50	0.1303	0.3809	0.3138	0.0004	0.0293	0.0269	32.9	0.0118	0.0009	1.53

**Table 111**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016
------

Air Basin	MD
-----------	----

Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
	120	0.1078	0.4558	0.6645	0.0008	0.0550	0.0506	64.8	0.0097	0.0017	2.97
	175	0.1676	0.8488	1.2792	0.0016	0.0699	0.0643	143.8	0.0151	0.0038	6.56
	250	0.1989	0.6255	1.8028	0.0025	0.0690	0.0635	222.7	0.0179	0.0058	10.11
	500	0.2558	1.0674	2.2733	0.0031	0.0873	0.0803	311.0	0.0231	0.0081	14.13
	750	0.4845	2.0123	4.3689	0.0059	0.1663	0.1530	586.4	0.0437	0.0153	26.63
Welders	15	0.0089	0.0396	0.0552	0.0001	0.0032	0.0030	6.2	0.0008	0.0002	0.28
	25	0.0171	0.0519	0.0957	0.0001	0.0051	0.0047	11.3	0.0015	0.0003	0.51
	50	0.0725	0.2489	0.2260	0.0003	0.0182	0.0167	25.9	0.0065	0.0007	1.20
	120	0.0498	0.2581	0.3303	0.0005	0.0267	0.0245	39.5	0.0045	0.0010	1.80
	175	0.0857	0.5408	0.6972	0.0011	0.0364	0.0335	98.1	0.0077	0.0026	4.47
	250	0.0701	0.2427	0.7413	0.0013	0.0222	0.0205	119.0	0.0063	0.0031	5.39
	500	0.0912	0.3360	0.9083	0.0016	0.0291	0.0268	167.4	0.0082	0.0043	7.58

<sup>a</sup> ROG, CO, NOx, SOx, PM, CO2 and CH4 emission factors calculated by dividing total daily emissions in MDAB by total hours of operation in MDAB by equipment type and horsepower range calculated with CARB OFFROAD 2007 model.

Hourly fuel use calculated by dividing total daily fuel use in MDAB by total hours of operation in MDAB by equipment type and horsepower range.

Diesel PM10 emission factor = PM emission factor

Diesel PM2.5 emission factor [lb/hr] = PM10 emission factor [lb/hr] x PM2.5 fraction of PM10

PM2.5 Fraction= 0.920

From Appendix A, Final-Methodology to Calculate Particulate Matter (PM) 2.5

and PM 2.5 Significance Thresholds, SCAQMD, October 2006,

[http://www.aqmd.gov/ceqa/handbook/PM2\\_5/PM2\\_5.html](http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html)

N2O emission factors calculated by multiplying hourly fuel use by 0.26 g/gallon from Table 13.7 from 2013 Climate Registry Default Emission Factors downloaded from

<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>

Table 112

Motor Vehicle Entrained Road Dust Emission Factors - Controlled Fugitive PM

Vehicle Type	Surface	Silt Loading (sL, g/m2) or Silt Content (s, %) <sup>a</sup>	Average Weight (W) (tons) <sup>b</sup>	Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup>	Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup>	Control Efficiency (%) <sup>d</sup>	Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup>	Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup>
1-Ton Crew Cab Flatbed, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab Flatbed, 4x4	Unpaved	8	5	1.31E+00	1.31E-01	57%	5.64E-01	5.64E-02
1-Ton Crew Cab, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4	Unpaved	8	5	1.31E+00	1.31E-01	57%	5.64E-01	5.64E-02
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	Unpaved	8	5	1.31E+00	1.31E-01	57%	5.64E-01	5.64E-02
1-Ton Crew Cab, 4x4, Gale-Pisgah	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4, Gale-Pisgah	Unpaved	8	5	1.31E+00	1.31E-01	57%	5.64E-01	5.64E-02
1-Ton Crew Cab, 4x4, Substation	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4, Substation	Unpaved	8	5	1.31E+00	1.31E-01	57%	5.64E-01	5.64E-02
1-Ton Crew Cab, 4x4, Transmission	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4, Transmission	Unpaved	8	5	1.31E+00	1.31E-01	57%	5.64E-01	5.64E-02
1-Ton Truck, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Truck, 4x4	Unpaved	8	5	1.31E+00	1.31E-01	57%	5.64E-01	5.64E-02
2 Ton Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
2 Ton Truck	Unpaved	8	5	1.31E+00	1.31E-01	57%	5.64E-01	5.64E-02
3/4-Ton Pick-up Truck, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
3/4-Ton Pick-up Truck, 4x4	Unpaved	8	3.4	1.10E+00	1.10E-01	57%	4.74E-01	4.74E-02
3/4-Ton Truck, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
3/4-Ton Truck, 4x4	Unpaved	8	3.4	1.10E+00	1.10E-01	57%	4.74E-01	4.74E-02
40-Foot Flat Bed Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
40-Foot Flat Bed Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Aggregate Base Delivery Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Aggregate Base Delivery Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Asphalt Delivery Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Asphalt Delivery Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Auger Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Auger Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Boom Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04

Table 112

Motor Vehicle Entrained Road Dust Emission Factors - Controlled Fugitive PM

Vehicle Type	Surface	Silt Loading (sL, g/m2) or Silt Content (s, %) <sup>a</sup>	Average Weight (W) (tons) <sup>b</sup>	Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup>	Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup>	Control Efficiency (%) <sup>d</sup>	Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup>	Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup>
Boom Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Boom/Crane Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Boom/Crane Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Bucket Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Bucket Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Carry-all Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Carry-all Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Concrete Mixer Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Concrete Mixer Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Concrete Redi-Mix Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Concrete Redi-Mix Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Concrete Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Concrete Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Crew Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Crew Truck	Unpaved	8	5	1.31E+00	1.31E-01	57%	5.64E-01	5.64E-02
Dump Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Dump Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Extendable Flat Bed Pole Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Extendable Flat Bed Pole Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Flat Bed Pole Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Flat Bed Pole Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Flat Bed Truck w/Derrick	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Flat Bed Truck w/Derrick	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Flat Bed Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Flat Bed Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Flatbed Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Flatbed Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Foreman Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Foreman Truck	Unpaved	8	5	1.31E+00	1.31E-01	57%	5.64E-01	5.64E-02



Table 112

## Motor Vehicle Entrained Road Dust Emission Factors - Controlled Fugitive PM

Vehicle Type	Surface	Silt Loading (sL, g/m <sup>2</sup> ) or Silt Content (s, %) <sup>a</sup>	Average Weight (W) (tons) <sup>b</sup>	Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup>	Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup>	Control Efficiency (%) <sup>d</sup>	Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup>	Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup>
Fuel, Helicopter Support Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Fuel, Helicopter Support Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Gravel Delivery Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Gravel Delivery Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Inspection Services	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Inspection Services	Unpaved	8	3.4	1.10E+00	1.10E-01	57%	4.74E-01	4.74E-02
Jet A Fuel Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Jet A Fuel Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Lowboy Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Lowboy Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Manlift/Bucket Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Manlift/Bucket Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Pick-up Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Pick-up Truck	Unpaved	8	10	1.79E+00	1.79E-01	57%	7.70E-01	7.70E-02
Pipe Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Pipe Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Sleeving Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Sleeving Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Soils Test Crew Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Soils Test Crew Truck	Unpaved	8	6.5	1.47E+00	1.47E-01	57%	6.34E-01	6.34E-02
Splicing Lab	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Splicing Lab	Unpaved	8	5	1.31E+00	1.31E-01	57%	5.64E-01	5.64E-02
Splicing Rig	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Splicing Rig	Unpaved	8	5	1.31E+00	1.31E-01	57%	5.64E-01	5.64E-02
Stake Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Stake Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Static Truck/Tensioner	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Static Truck/Tensioner	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Structure Delivery Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04

Table 112

Motor Vehicle Entrained Road Dust Emission Factors - Controlled Fugitive PM

Vehicle Type	Surface	Silt Loading (sL, g/m2) or Silt Content (s, %) <sup>a</sup>	Average Weight (W) (tons) <sup>b</sup>	Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup>	Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup>	Control Efficiency (%) <sup>d</sup>	Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup>	Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup>
Structure Delivery Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Survey Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Survey Truck	Unpaved	8	3.4	1.10E+00	1.10E-01	57%	4.74E-01	4.74E-02
Tool Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Tool Truck	Unpaved	8	3.4	1.10E+00	1.10E-01	57%	4.74E-01	4.74E-02
Truck, Semi Tractor	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Truck, Semi Tractor	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Water Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Water Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Wire Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Wire Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Wiring Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Wiring Truck	Unpaved	8	17	2.27E+00	2.27E-01	57%	9.77E-01	9.77E-02
Worker Commute	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Worker Commute	Unpaved	8	3.4	1.10E+00	1.10E-01	57%	4.74E-01	4.74E-02

<sup>a</sup> Paved road silt loading from MDAQMD Mineral Guidance for paved low traffic road.

Unpaved road silt content from MDAQMD Mineral Guidance for unpaved industrial haul road.

<sup>b</sup> Average paved on-road vehicle weight in San Bernardino County from ARB Emission Inventory Methodology 7.9, Entrained Paved Road Dust (1997)

Unpaved worker commuting weight on access road assumed to be same as paved road weight

Unpaved weight for other trucks is based on upper limit of 33,000 lbs for medium heavy-duty trucks. Heavy heavy duty trucks are also in this range, as they range from 30,001 lbs to 60,000.

<sup>c</sup> Equations:

$EF(\text{paved}) = k_p (sL)^{0.91} (W)^{1.02}$

Ref: AP-42, Section 13.2.1, "Paved Roads," January 2011

$EF(\text{unpaved}) = k_u (s/12)^a (W/3)^b$

Ref: AP-42, Section 13.2.2, "Unpaved Roads," November 2006

Constants:

$k_p =$  0.0022 (Particle size multiplier for PM10)  
 0.00054 (Particle size multiplier for PM2.5)  
 $k_u =$  1.5 (Particle size multiplier for PM)

**Table 112**

**Motor Vehicle Entrained Road Dust Emission Factors - Controlled Fugitive PM**

<b>Vehicle Type</b>	<b>Surface</b>	<b>Silt Loading (sL, g/m2) or Silt Content (s, %)<sup>a</sup></b>	<b>Average Weight (W) (tons)<sup>b</sup></b>	<b>Un-controlled PM10 Emission Factor (lb/VMT)<sup>c</sup></b>	<b>Un-controlled PM2.5 Emission Factor (lb/VMT)<sup>c</sup></b>	<b>Control Efficiency (%)<sup>d</sup></b>	<b>Controlled PM10 Emission Factor (lb/VMT)<sup>e</sup></b>	<b>Controlled PM2.5 Emission Factor (lb/VMT)<sup>e</sup></b>
---------------------	----------------	---	--	--	---	---	---	--

a = 0.15 (Particle size multiplier for PM2.5)  
 0.9 for PM10  
 0.9 for PM2.5  
 b = 0.45 for PM10  
 0.45 for PM2.5

<sup>d</sup> Control efficiency from limiting speeds on unpaved roads to 15 mph, from Table XI-A, Mitigation Measure Examples, Fugitive Dust from Construction & Demolition, [http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/MM\\_fugitive.html](http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/MM_fugitive.html)

<sup>e</sup> Controlled emission factor [lb/mi] = Uncontrolled emission factor [lb/mi] x (1 - Control efficiency [%] / 100)

**Table 113  
Commuter Vehicle And Pick-up Truck Emission Factors**

EMFAC 2011  
2016 Estimated Annual Emissions  
EMFAC 2011 Vehicle Categories  
San Bernardino COUNTY  
Mojave Desert AIR BASIN  
Mojave Desert AQMD  
All Model Years

Comm. Vehicles Gas (pounds/mile)		MDV Diesel (pounds/mile)		MDV Gas (pounds/mile)		MDV Combo (pounds/mile)	
CO	0.00502350	CO	0.00036597	CO	0.00784027	CO	0.00410312
NOx	0.00054760	NOx	0.00112028	NOx	0.00114357	NOx	0.00113192
ROG	0.00017532	ROG	0.00006639	ROG	0.00028277	ROG	0.00017458
SOx	0.00000845	SOx	0.00000827	SOx	0.00001317	SOx	0.00001072
PM10	0.00010306	PM10	0.00014987	PM10	0.00010343	PM10	0.00012665
PM2.5	0.00000402	PM2.5	0.00004711	PM2.5	0.00000438	PM2.5	0.00002575
CO2	0.69705741	CO2	0.74885278	CO2	1.15450592	CO2	0.95167935
CH4	0.00004259	CH4	0.00000308	CH4	0.00007002	CH4	0.00003655
N2O	0.00002278	N2O	0.00002848	N2O	0.00004757	N2O	0.00003803

Note: Commuter vehicles are based on emissions from gasoline LDV, LDT1, and LDT2

Methane and N2O calculated as prescribed by ARB:

[http://www.arb.ca.gov/msei/emfac2011-faq.htm#emfac2011\\_web\\_db\\_qstn07](http://www.arb.ca.gov/msei/emfac2011-faq.htm#emfac2011_web_db_qstn07)

- **How do I calculate Methane (CH4) and Nitrous Oxide (N2O) emissions?**
  - Methane (CH4) calculation method
    - Run EMFAC2011-LDV to calculate CH4 for those vehicle categories;
    - Use  $CH4 = 0.0408 * TOG = 0.058821 * THC$  to calculate CH4 for EMFAC2011-HD categories.
  - Nitrous Oxide (N2O) calculation method
    - Use 4.16% of NOx to calculate N2O for all gasoline vehicles, the same assumption as for the emissions inventory for the [Advanced Clean Cars rule](#);
    - Use 0.3316 g/gallon fuel to calculate for all diesel vehicles as the GHG inventory.

**Table 114**  
**Light Heavy-Duty and Heavy Heavy-Duty Vehicle Emission Factors**

EMFAC 2011  
 2016 Estimated Annual Emissions  
 EMFAC 2011 Vehicle Categories  
 San Bernardino COUNTY  
 Mojave Desert AIR BASIN  
 Mojave Desert AQMD  
 All Model Years

LHDT Diesel (pounds/mile)		HHDT Diesel (pounds/mile)	
CO	0.00192798	CO	0.00284760
NOx	0.01237034	NOx	0.01656235
ROG	0.00027862	ROG	0.00042317
SOx	0.00001103	SOx	0.00003500
PM10	0.00026112	PM10	0.00054297
PM2.5	0.00005485	PM2.5	0.00030129
CO2	1.11519022	CO2	3.54025345
CH4	0.00001294	CH4	0.00001966
N2O	0.00003802	N2O	0.00012069

Note: HHDT is based on the emissions from the T7 Tractor.

Methane and N2O calculated as prescribed by ARB:

[http://www.arb.ca.gov/msei/emfac2011-faq.htm#emfac2011\\_web\\_db\\_qstn07](http://www.arb.ca.gov/msei/emfac2011-faq.htm#emfac2011_web_db_qstn07)

- **How do I calculate Methane (CH4) and Nitrous Oxide (N2O) emissions?**
  - Methane (CH4) calculation method
    - Run EMFAC2011-LDV to calculate CH4 for those vehicle categories;
    - Use  $CH_4 = 0.0408 * TOG = 0.058821 * THC$  to calculate CH4 for EMFAC2011-HD categories.
  - Nitrous Oxide (N2O) calculation method
    - Use 4.16% of NOx to calculate N2O for all gasoline vehicles, the same assumption as for the emissions inventory for the [Advanced Clean Cars rule](#);
    - Use 0.3316 g/gallon fuel to calculate for all diesel vehicles as the GHG inventory.

**Table 115**

**Fugitive Dust Emission Factors - Controlled  
Soil Dropping During Excavation**

Emission Factor [lb/cu. yd] = 0.0032 x (mean wind speed [mi/hr] / 5)<sup>1.3</sup> / (moisture [%] / 2)<sup>1.4</sup> x (number drops per ton) x (density [ton/cu. yd]) x k  
Reference: AP-42, Equation (1), Section 13.2.4, November 2006

Parameter	Value	Basis
Mean Wind Speed	7.7	Conservative default from Wind Erosion from Unpaved Areas and Roads, MDAQMD Mineral Guidance.
Moisture	10	Assumed moisture level achieved by watering
Number Drops	4	Assumption
Soil Density	1.215	Table 2.46, Handbook of Solid Waste Management

PM10 Emission Factor 1.00E-03 lb/cu. yd (k = 0.35)  
PM2.5 Emission Factor 1.52E-04 lb/cu. yd (k = 0.053)

Emissions [pounds per day] = Controlled emission factor [pounds per cubic yard] x Volume soil handled [cubic yards per day]

**Storage Pile Wind Erosion**

Emission Factor [lb/day-acre] = k x 1.7 x (silt content [%] / 1.5) x (365 / 235) x (percentage of time unobstructed wind exceeds 12 mph / 15)  
Reference: MDAQMD Emission Inventory Guidance, Mineral Handling and Processing Industries, April 2000

Parameter	Value	Basis
Silt Content	30	Conservative default from Bulldozing, Scraping and Grading, MDAQMD Mineral Guidance.
Pct. time wind > 12 mph	100	Worst-case assumption

PM10 Emission Factor (Uncontrolled) 176.0 lb/day-acre (k = 0.5)  
PM2.5 Emission Factor (Uncontrolled) 70.4 lb/day-acre (k = 0.2)  
Reduction from Watering Twice/Day 90% Control efficiency from watering storage pile by hand at a rate of 1.4 gallons/hour-yard<sup>2</sup>, Table XI-B, Mitigation Measure Examples, Fugitive Dust from Materials Handling, [http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/MM\\_fugitive.html](http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/MM_fugitive.html)  
Controlled PM10 Emission Factor 17.6 lb/day-acre  
Controlled PM2.5 Emission Factor 7.0 lb/day-acre

Emissions [pounds per day] = Controlled emission factor [pounds per acre-day] x Storage pile surface area [acres]

**Bulldozing, Scraping and Grading**

PM10 Emission Factor [lb/hr] = 0.75 x (silt content [%])<sup>1.5</sup> / (moisture)<sup>1.4</sup>

**Table 115**

**Fugitive Dust Emission Factors - Controlled**

PM2.5 Emission Factor [lb/hr] = 0.60 x (silt content [%])<sup>1.2</sup> / (moisture)<sup>1.3</sup>

Reference: AP-42, Table 11.9-1, July 1998

Parameter	Value	Basis
Silt Content	15	Default value from NDAQMD Rule 403.2 (F)
Moisture	10	Assumed moisture level achieved by watering

PM10 Emission Factor 1.73 lb/hr

PM2.5 Emission Factor 0.78 lb/hr

Emissions [pounds per day] = Controlled emission factor [pounds per hour] x Bulldozing, scraping or grading time [hours/day]

**Uncontrolled Alternative Project Segment 9 Emissions**



**Table 1**  
**Annual Construction Emissions Summary with Alternative Transmission Segment 9**

**Maximum Annual Construction Emissions by Component**

<b>Component</b>	<b>VOC (tons/year)</b>	<b>CO (tons/year)</b>	<b>NOX (tons/year)</b>	<b>SOX (tons/year)</b>	<b>PM10 (tons/year)</b>	<b>PM2.5 (tons/year)</b>	<b>CO2e (tons/year)</b>
Substation	1.29	6.20	17.44	0.03	479.75	130.27	3,540.09
Distribution for Station Light & Power	0.02	0.07	0.13	0.00	0.13	0.02	32.88
Modifications to Existing Substations	0.57	3.50	4.08	0.01	0.81	0.33	894.34
Transmission and Subtransmission Lines	17.54	70.18	124.90	9.18	1,520.21	312.09	27,683.01
Telecommunications System	0.15	0.82	1.52	0.00	1.59	0.22	343.83
<b>Total</b>	<b>19.56</b>	<b>80.77</b>	<b>148.08</b>	<b>9.23</b>	<b>2,002.49</b>	<b>442.93</b>	<b>32,494.15</b>

<sup>a</sup> Maximum annual emissions are during months 1 through 12

**Table 2**  
**Operational Emissions with Alternative Transmission Segment 9**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Emergency Generator Testing	0.40	4.34	7.61	0.01	0.25	0.25	706.90
SF <sub>6</sub> Leakage	--	--	--	--	--	--	1,229.70
Motor Vehicle Exhaust	0.02	0.13	0.40	0.00	0.05	0.02	267.79
Motor Vehicle Fugitive PM	--	--	--	--	102.35	10.37	
<b>Total</b>	<b>0.42</b>	<b>4.47</b>	<b>8.01</b>	<b>0.01</b>	<b>102.66</b>	<b>10.64</b>	<b>2,204.39</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Emergency Generator Testing	0.01	0.11	0.20	0.00	0.01	0.01	18.38
SF <sub>6</sub> Leakage	--	--	--	--	--	--	224.42
Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	1.25
Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.01	--
<b>Total</b>	<b>0.01</b>	<b>0.11</b>	<b>0.20</b>	<b>0.00</b>	<b>0.11</b>	<b>0.02</b>	<b>244.05</b>

**Emergency Generator Testing Emissions**

Horsepower	Hours/Day	Fuel Use (gal/hr)	Emission Factors (g/bhp-hr) <sup>a</sup>					Emission Factors (g/gal)		
			CO	VOC <sup>b</sup>	NOx <sup>b</sup>	PM10 <sup>c</sup>	PM2.5 <sup>c</sup>	CO <sub>2</sub> <sup>d</sup>	CH <sub>4</sub> <sup>e</sup>	N <sub>2</sub> O <sup>e</sup>
757	1	31.3	2.6	0.24	4.56	0.15	0.15	10,210	0.41	0.083

<sup>a</sup> Emission factors assumed the same as emission limits for emergency CI engine in Title 17, CCR, Section 93115.6 Table 2

<sup>b</sup> For NMHC+NOx limit, emissions assumed to be 5 percent ROC and 95 percent NOx, from Table D-25 of 2011 Carl Moyer Program Guidelines - <http://www.arb.ca.gov/msprog/moyer/guidelines/current.htm>

<sup>c</sup> PM10 and PM2.5 assumed to be same as PM emission standards.

<sup>d</sup> From Table C-1 of Title 40, Code of Federal Regulations, Subpart 98 for No. 2 distillate fuel oil.

<sup>e</sup> From Table C-2 of Title 40, Code of Federal Regulations, Subpart 98 for No. 2 distillate fuel oil.

Load Factor	Emission Rates (lb/hr)								
	CO <sup>a</sup>	VOC <sup>a</sup>	NOx <sup>a</sup>	SOx <sup>b</sup>	PM10 <sup>a</sup>	PM2.5 <sup>a</sup>	CO <sub>2</sub> <sup>c</sup>	CH <sub>4</sub> <sup>c</sup>	N <sub>2</sub> O <sup>c</sup>
1	4.34	0.40	7.61	0.007	0.25	0.25	704.53	0.03	0.01

Diesel Fuel Density =

6.943 lb/gal

Diesel Fuel Sulfur =

15 ppmw

<sup>a</sup> Emission Rate [lb/hr] = Emission Factor [g/bhp-hr] x Engine Horsepower [hp] x Load Factor [unitless] / 453.6 [g/lb]

<sup>b</sup> Emission Rate [lb/hr] = Fuel Use [gal/hr] x Fuel Density [lb/gal] x Fuel Sulfur [ppmw] x 10<sup>-6</sup> x 2 [lb SO<sub>2</sub>/lb S]

<sup>c</sup> Emission Rate [lb/hr] = Emission Factor [g/gal] x Fuel Use [gal/hr] / 453.6 [g/lb]

Daily Emissions (lb/day) <sup>a</sup>									
CO	VOC	NOx	SOx	PM10	PM2.5	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e <sup>b</sup>
4.34	0.40	7.61	0.01	0.25	0.25	704.53	0.03	0.01	706.90

**Table 2**  
**Operational Emissions with Alternative Transmission Segment 9**

<sup>a</sup> Daily Emissions [lb/day] = Hourly Emissions [lb/hr-unit] x Operating Time [hr/day]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

Op. (hr/year)	Annual Emissions (tons) <sup>a</sup>									
	CO	VOC	NOx	SOx	PM10	PM2.5	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2e</sub>
52	0.11	0.01	0.20	0.00	0.01	0.01	18.32	0.00	0.00	18.38

<sup>a</sup> Annual Emissions [tons] = Hourly Emissions [lb/hr] x Operating Time [hr/year]

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
1-Ton Crew Cab, 4x4, Substation	1	48	N/A	60
1-Ton Crew Cab, 4x4, Transmission	1	2	N/A	133.4
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	1	1	N/A	71
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	1	N/A	89

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO <sub>2</sub> (lb/mi) <sup>a</sup>	CH <sub>4</sub> (lb/mi) <sup>a</sup>	N <sub>2</sub> O (lb/mi) <sup>a</sup>
1-Ton Crew Cab, 4x4, Substation	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab, 4x4, Transmission	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab, 4x4, Gale-Pisgah	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO <sub>2</sub> (lb/day) <sup>a</sup>	CH <sub>4</sub> (lb/day) <sup>a</sup>	N <sub>2</sub> O (lb/day) <sup>a</sup>	CO <sub>2e</sub> (lb/day) <sup>b</sup>
1-Ton Crew Cab, 4x4, Substation	0.00	0.02	0.07	0.00	0.01	0.00	44.93	0.00	0.00	45.46
1-Ton Crew Cab, 4x4, Transmission	0.01	0.05	0.15	0.00	0.02	0.01	99.90	0.00	0.00	101.08
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	0.00	0.03	0.08	0.00	0.01	0.00	53.17	0.00	0.00	53.80
1-Ton Crew Cab, 4x4, Gale-Pisgah	0.01	0.03	0.10	0.00	0.01	0.00	66.65	0.00	0.00	67.44
<b>Total</b>	<b>0.02</b>	<b>0.13</b>	<b>0.40</b>	<b>0.00</b>	<b>0.05</b>	<b>0.02</b>	<b>264.64</b>	<b>0.00</b>	<b>0.01</b>	<b>267.79</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2e</sub> (tons) <sup>b</sup>
1-Ton Crew Cab, 4x4, Substation	0.00	0.00	0.00	0.00	0.00	0.00	1.08	0.00	0.00	1.09
1-Ton Crew Cab, 4x4, Transmission	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.10
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03

**Table 2**  
**Operational Emissions with Alternative Transmission Segment 9**

1-Ton Crew Cab, 4x4, Gale-Pisgah	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.24</b>	<b>0.00</b>	<b>0.00</b>	<b>1.25</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
1-Ton Crew Cab, 4x4, Substation	1	Unpaved	0	48	1.311	0.131	0.00	0.00	0.00	0.00
1-Ton Crew Cab, 4x4, Substation	1	Paved	60	48	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Crew Cab, 4x4, Transmission	1	Unpaved	73.4	2	1.311	0.131	96.19	9.62	0.10	0.01
1-Ton Crew Cab, 4x4, Transmission	1	Paved	60	2	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	1	Unpaved	4	1	1.311	0.131	5.24	0.52	0.00	0.00
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	1	Paved	67	1	0.003	0.001	0.22	0.05	0.00	0.00
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	Unpaved	0	1	1.311	0.131	0.00	0.00	0.00	0.00
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	Paved	89	1	0.003	0.001	0.30	0.07	0.00	0.00
<b>Total</b>							<b>102.35</b>	<b>10.37</b>	<b>0.10</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**SF<sub>6</sub> Leakage Greenhouse Gas Emissions**

Item	Value	Units
Total SF <sub>6</sub>	3,756	pounds
SF <sub>6</sub> Leakage Rate	0.5	%/year
SF <sub>6</sub> Emissions	18.78	pounds
SF <sub>6</sub> Global Warming Potential <sup>a</sup>	23,900	
<b>CO<sub>2</sub>e Emissions<sup>b</sup></b>	<b>1,230</b>	<b>lbs/day</b>
<b>CO<sub>2</sub>e Emissions<sup>b</sup></b>	<b>224</b>	<b>tpy</b>

<sup>a</sup> From Table A-1 of Title 40, Code of Federal Regulations, Subpart 98

<sup>b</sup> CO<sub>2</sub>e emissions [tpy] = SF<sub>6</sub> emissions [lb] x

Global warming potential [lb CO<sub>2</sub>e/lb SF<sub>6</sub>] / 2000 [lb/ton]

**Table 3**  
**Annual Construction Emissions Summary with Alternative Transmission Segment 9**

**Maximum Annual Construction Emissions by Component on BLM Land<sup>a</sup>**

<b>Component</b>	<b>VOC (tons/year)</b>	<b>CO (tons/year)</b>	<b>NOX (tons/year)</b>	<b>SOX (tons/year)</b>	<b>PM10 (tons/year)</b>	<b>PM2.5 (tons/year)</b>	<b>CO2e (tons/year)</b>
Substation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Distribution for Station Light & Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Modifications to Existing Substations	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transmission and Subtransmission Lines	5.62	22.20	39.16	3.19	529.83	108.65	8,751.15
Telecommunications System	0.01	0.07	0.13	0.00	0.03	0.01	29.84
<b>Total</b>	<b>5.63</b>	<b>22.27</b>	<b>39.28</b>	<b>3.20</b>	<b>529.85</b>	<b>108.66</b>	<b>8,780.99</b>

<sup>a</sup> Maximum annual emissions are during months 1 through 12

**Table 4  
Annual Construction Emissions Summary with Alternative Transmission Segment 9**

**Maximum Annual Construction Emissions by Component on DOD Land<sup>a</sup>**

<b>Component</b>	<b>VOC (tons/year)</b>	<b>CO (tons/year)</b>	<b>NOX (tons/year)</b>	<b>SOX (tons/year)</b>	<b>PM10 (tons/year)</b>	<b>PM2.5 (tons/year)</b>	<b>CO2e (tons/year)</b>
Substation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Distribution for Station Light & Power	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Modifications to Existing Substations	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Transmission and Subtransmission Lines	0.72	2.86	5.05	0.41	68.32	14.01	1,128.37
Telecommunications System	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.72</b>	<b>2.86</b>	<b>5.05</b>	<b>0.41</b>	<b>68.32</b>	<b>14.01</b>	<b>1,128.37</b>

<sup>a</sup> Maximum annual emissions are during months 1 through 12

**Table 5**  
**Operational Emissions with Alternative Transmission Segment 9 on BLM Land**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Motor Vehicle Exhaust	0.00	0.01	0.04	0.00	0.00	0.00	23.76
Motor Vehicle Fugitive PM	--	--	--	--	33.59	3.36	
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.04</b>	<b>0.00</b>	<b>33.59</b>	<b>3.36</b>	<b>23.76</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.00	--
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.02</b>

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	1	N/A	6
1-Ton Crew Cab, 4x4, Transmission	1	2	N/A	26

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
1-Ton Crew Cab, 4x4, Gale-Pisgah	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab, 4x4, Transmission	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
1-Ton Crew Cab, 4x4, Gale-Pisgah	0.00	0.00	0.01	0.00	0.00	0.00	4.30	0.00	0.00	4.35
1-Ton Crew Cab, 4x4, Transmission	0.00	0.01	0.03	0.00	0.00	0.00	19.18	0.00	0.00	19.41
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.48</b>	<b>0.00</b>	<b>0.00</b>	<b>23.76</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
1-Ton Crew Cab, 4x4, Gale-Pisgah	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1-Ton Crew Cab, 4x4, Transmission	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>

**Table 5  
Operational Emissions with Alternative Transmission Segment 9 on BLM Land**

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
1-Ton Crew Cab, 4x4, Gale-Pisgah	1	Paved	6	1	0.003	0.001	0.02	0.00	0.00	0.00
1-Ton Crew Cab, 4x4, Transmission	1	Unpaved	26	2	1.311	0.131	33.57	3.36	0.03	0.00
<b>Total</b>							<b>33.59</b>	<b>3.36</b>	<b>0.03</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]



**Table 6**  
**Operational Emissions with Alternative Transmission Segment 9 on BLM Land**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	2.50
Motor Vehicle Fugitive PM	--	--	--	--	4.33	0.43	
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.33</b>	<b>0.43</b>	<b>2.50</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	--
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
1-Ton Crew Cab, 4x4, Transmission	1	2	N/A	3

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
1-Ton Crew Cab, 4x4, Transmission	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
1-Ton Crew Cab, 4x4, Transmission	0.00	0.00	0.00	0.00	0.00	0.00	2.47	0.00	0.00	2.50
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.47</b>	<b>0.00</b>	<b>0.00</b>	<b>2.50</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
1-Ton Crew Cab, 4x4, Transmission	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 6**  
**Operational Emissions with Alternative Transmission Segment 9 on BLM Land**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
1-Ton Crew Cab, 4x4, Transmission	1	Unpaved	3	2	1.311	0.131	4.33	0.43	0.00	0.00
<b>Total</b>							<b>4.33</b>	<b>0.43</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 7**  
**Total Construction Emissions Summary with Alternative Transmission Segment 9**

**Total Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>										
Survey	0.00	0.00	0.00	0.00	0.07	0.01	0.68	1.00	0.00	0.00
Grading	0.96	4.03	10.57	0.02	445.31	126.50	1,936.17	1.00	0.00	0.00
Perimeter Wall	0.06	0.43	0.52	0.00	1.13	0.14	203.77	1.00	0.00	0.00
Water Well	0.02	0.16	0.14	0.00	0.54	0.06	70.96	1.00	0.00	0.00
Civil	0.12	0.80	4.18	0.01	24.11	2.60	908.53	1.00	0.00	0.00
Electrical	0.01	0.05	0.06	0.00	0.06	0.01	10.26	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.16	0.02	7.43	1.00	0.00	0.00
MEER	0.01	0.11	0.04	0.00	0.34	0.04	18.75	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.09	0.01	3.32	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.07	0.01	5.75	1.00	0.00	0.00
Asphalting	0.10	0.51	1.92	0.00	7.86	0.86	374.47	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>										
Survey	0.00	0.11	0.01	0.00	0.30	0.04	15.57	0.00	1.00	0.00
Civil	0.78	4.41	6.27	0.02	10.77	1.43	1,594.62	0.00	1.00	0.00
Electrical	0.19	1.41	1.36	0.00	1.09	0.22	246.08	0.00	0.67	0.67
Wiring	0.00	0.07	0.01	0.00	0.21	0.03	9.91	0.00	0.67	0.67
Control Room	0.01	0.14	0.06	0.00	0.35	0.05	24.75	0.00	0.67	0.67
Maintenance	0.00	0.06	0.01	0.00	0.24	0.03	8.29	0.00	0.67	0.67
Asphalting	0.10	0.41	1.11	0.00	2.19	0.26	188.30	0.00	0.00	1.00
Transformer Assembly	0.09	0.63	0.68	0.00	0.50	0.10	135.09	0.00	0.67	0.67
Testing	0.01	0.39	0.04	0.00	0.50	0.09	55.34	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>										
Overhead Construction	0.00	0.03	0.04	0.00	0.05	0.01	13.31	1.00	0.00	0.00
Underground Civil Construction	0.01	0.03	0.05	0.00	0.05	0.01	11.87	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.04	0.01	7.70	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	1.00	0.00	0.00
Civil	0.11	0.65	0.78	0.00	0.10	0.05	184.00	1.00	0.00	0.00
Electrical	0.06	0.34	0.50	0.00	0.08	0.04	84.18	1.00	0.00	0.00
Wiring	0.00	0.02	0.00	0.00	0.01	0.00	2.49	1.00	0.00	0.00
MEER	0.01	0.06	0.04	0.00	0.03	0.01	12.10	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>										

**Table 7**  
**Total Construction Emissions Summary with Alternative Transmission Segment 9**

**Total Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	1.00	0.00	0.00
Civil	0.20	1.17	1.37	0.00	0.19	0.09	342.12	1.00	0.00	0.00
Electrical	0.09	0.52	0.71	0.00	0.13	0.06	124.34	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.04	0.01	7.40	1.00	0.00	0.00
Control Room	0.01	0.07	0.05	0.00	0.03	0.01	14.83	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	1.00	0.00	0.00
Transformer Assembly	0.08	0.48	0.60	0.00	0.10	0.04	103.59	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>										
Survey	0.01	0.16	0.02	0.00	4.80	0.49	22.91	1.00	0.00	0.00
Construction and Materials Yards	3.60	16.40	31.77	0.07	5.19	1.93	6,520.20	0.40	0.40	0.40
Right-of-Way Clearing	0.66	3.07	5.07	0.01	271.22	85.98	1,071.40	1.00	0.00	0.00
Roads and Landing Work	1.49	5.78	11.61	0.02	464.87	143.17	2,309.00	1.00	0.00	0.00
Retaining Wall Installation	2.40	12.20	20.96	0.05	230.47	23.82	4,676.57	1.00	0.00	0.00
Wet Crossing Installation	1.30	6.64	11.68	0.03	131.30	13.58	2,355.94	1.00	0.00	0.00
Guard Structure Installation	0.12	0.59	0.97	0.00	9.58	1.00	245.02	0.40	0.40	0.40
Remove Existing Conductor & GW	0.25	1.22	2.59	0.01	22.62	2.35	563.41	0.40	0.40	0.40
LST Removal	0.27	1.09	1.97	0.00	6.95	0.78	358.39	0.40	0.40	0.40
LST Foundation Removal	0.03	0.14	0.21	0.00	0.80	0.09	48.29	0.40	0.40	0.40
Install LST Foundations	1.96	9.20	18.76	0.44	330.85	33.89	5,059.69	0.40	0.40	0.40
LST Steel Haul	0.94	2.16	6.23	2.01	29.95	3.19	1,586.92	0.40	0.40	0.40
LST Steel Assembly	6.35	26.75	45.17	6.63	107.02	12.77	9,366.20	0.40	0.40	0.40
LST Erection	8.48	19.87	40.95	10.92	138.31	15.34	9,027.25	0.40	0.40	0.40
Install TSP Foundations	1.08	5.18	9.93	0.03	157.66	16.14	2,585.63	0.40	0.40	0.40
TSP Haul	0.05	0.22	0.42	0.00	8.19	0.84	83.32	0.40	0.40	0.40
TSP Assembly	0.11	0.55	0.81	0.00	10.75	1.12	153.21	0.40	0.40	0.40
TSP Erection	0.10	0.54	0.78	0.00	7.67	0.81	145.70	0.40	0.40	0.40
Install Conductor	5.49	19.58	24.30	2.55	142.03	15.55	6,508.79	0.40	0.40	0.40
Guard Structure Removal	0.07	0.34	0.56	0.00	6.56	0.68	101.26	0.40	0.40	0.40
115 kV Pole Removal	0.01	0.04	0.08	0.00	0.69	0.07	15.66	0.40	0.40	0.40
Install TSP Riser Foundations	0.08	0.42	0.82	0.00	17.22	1.76	212.83	0.40	0.40	0.40
TSP Riser Haul	0.00	0.02	0.04	0.00	0.82	0.08	8.33	0.40	0.40	0.40
TSP Riser Assembly	0.05	0.27	0.41	0.00	5.37	0.56	76.61	0.40	0.40	0.40
TSP Riser Erection	0.05	0.27	0.39	0.00	3.84	0.41	72.85	0.40	0.40	0.40
Vault Installation	0.06	0.32	0.51	0.00	10.37	1.06	106.76	0.40	0.40	0.40

**Table 7**  
**Total Construction Emissions Summary with Alternative Transmission Segment 9**

**Total Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Duct Bank Installation	0.02	0.20	0.25	0.00	10.40	1.06	55.07	0.40	0.40	0.40
Install Underground Cable	0.09	0.43	0.98	0.00	11.01	1.13	216.58	0.40	0.40	0.40
Restoration	0.20	1.33	1.33	0.00	100.98	31.13	223.00	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 2/Segment 8)</b>										
Install Cable	0.03	0.14	0.33	0.00	0.45	0.05	66.73	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	1.00	0.00	0.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.18	0.02	12.27	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>										
Install Cable	0.01	0.06	0.14	0.00	0.19	0.02	27.80	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.03	0.00	0.11	0.01	6.56	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>										
Install Cable	0.02	0.10	0.23	0.00	0.16	0.02	46.14	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.04	0.00	0.09	0.01	10.26	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>										
Install Cable	0.03	0.14	0.29	0.00	0.17	0.03	60.35	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.33	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.09	0.01	13.10	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>										
Install Cable	0.02	0.09	0.18	0.00	0.11	0.02	37.72	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.33	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.08	0.01	11.63	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>										
Install 5 Foot Crossarm	0.00	0.02	0.03	0.00	0.08	0.01	6.39	1.00	0.00	0.00
Install Down Guys	0.00	0.02	0.02	0.00	0.06	0.01	4.93	1.00	0.00	0.00
Install Cable	0.03	0.14	0.32	0.00	0.43	0.05	64.46	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.05	0.00	0.72	1.00	0.00	0.00
Underground Conduit from Pole to Pole	0.00	0.02	0.03	0.00	0.11	0.01	8.16	1.00	0.00	0.00
Restoration	0.00	0.01	0.00	0.00	0.07	0.01	1.29	1.00	0.00	0.00
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>										
Install 5 Foot Crossarm	0.02	0.09	0.19	0.00	0.02	0.01	39.90	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.09	0.17	0.00	0.02	0.01	41.02	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.01	0.00	3.93	1.00	0.00	0.00
Install Cable	0.01	0.08	0.17	0.00	0.02	0.01	36.10	1.00	0.00	0.00

**Table 7**  
**Total Construction Emissions Summary with Alternative Transmission Segment 9**

**Total Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Splice Fiber Optic Cable	0.00	0.02	0.00	0.00	0.02	0.00	3.53	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.06	0.09	0.00	0.03	0.01	22.55	1.00	0.00	0.00
Restoration	0.00	0.02	0.01	0.00	0.01	0.00	3.69	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>										
All	0.01	0.08	0.09	0.00	0.02	0.01	27.81	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>										
Months 1-12	19.56	80.77	148.08	9.23	2,002.49	442.93	32,494.15			
Months 13-24	12.82	49.53	84.18	9.09	498.20	67.71	19,328.02			
Months 19-30	12.23	45.91	80.01	9.08	490.37	66.65	18,121.06			
<b>12-Month Maximum</b>	<b>19.56</b>	<b>80.77</b>	<b>148.08</b>	<b>9.23</b>	<b>2,002.49</b>	<b>442.93</b>	<b>32,494.15</b>			
<b>Total GHG Emissions (metric tons)</b>							<b>55,412.50</b>			

**Table 8**

**Total Off-Road Construction Equipment Emissions Summary with Alternative Transmission Segment 9**

**Total Off-Road Construction Equipment Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Grading	0.85	3.12	6.80	0.01	0.26	0.24	1,092.04	1.00	0.00	0.00
Perimeter Wall	0.06	0.33	0.36	0.00	0.01	0.01	160.94	1.00	0.00	0.00
Water Well	0.02	0.11	0.12	0.00	0.00	0.00	62.74	1.00	0.00	0.00
Civil	0.02	0.07	0.10	0.00	0.01	0.00	24.90	1.00	0.00	0.00
Electrical	0.01	0.03	0.06	0.00	0.00	0.00	7.78	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Asphalting	0.07	0.26	0.61	0.00	0.02	0.02	87.66	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
Civil	0.73	3.64	5.07	0.01	0.24	0.22	1,267.98	0.00	1.00	0.00
Electrical	0.18	0.94	1.31	0.00	0.08	0.08	180.29	0.00	0.67	0.67
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	0.00	0.67	0.67
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67
Asphalting	0.09	0.32	0.76	0.00	0.03	0.03	109.57	0.00	0.00	1.00
Transformer Assembly	0.08	0.36	0.65	0.00	0.03	0.03	98.12	0.00	0.67	0.67
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>										
Overhead Construction	0.00	0.02	0.04	0.00	0.00	0.00	12.68	1.00	0.00	0.00
Underground Civil Construction	0.01	0.02	0.04	0.00	0.00	0.00	10.39	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.00	0.00	7.27	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Civil	0.11	0.57	0.73	0.00	0.04	0.04	163.64	1.00	0.00	0.00
Electrical	0.06	0.26	0.49	0.00	0.02	0.02	72.67	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>										

**Table 8**  
**Total Off-Road Construction Equipment Emissions Summary with Alternative Transmission Segment 9**

**Total Off-Road Construction Equipment Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Civil	0.19	1.01	1.27	0.00	0.07	0.06	304.10	1.00	0.00	0.00
Electrical	0.09	0.38	0.70	0.00	0.03	0.03	103.81	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Transformer Assembly	0.08	0.37	0.59	0.00	0.03	0.03	88.72	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>										
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Construction and Materials Yards	3.31	10.95	25.97	0.05	0.92	0.84	4,736.74	0.40	0.40	0.40
Right-of-Way Clearing	0.63	2.25	4.84	0.01	0.18	0.16	926.78	1.00	0.00	0.00
Roads and Landing Work	1.46	5.08	11.25	0.02	0.41	0.37	2,154.97	1.00	0.00	0.00
Retaining Wall Installation	2.25	10.13	17.26	0.04	0.65	0.60	3,707.32	1.00	0.00	0.00
Wet Crossing Installation	1.20	5.23	9.26	0.02	0.36	0.33	1,712.79	1.00	0.00	0.00
Guard Structure Installation	0.11	0.49	0.88	0.00	0.03	0.03	214.70	0.40	0.40	0.40
Remove Existing Conductor & GW	0.23	0.94	2.36	0.00	0.07	0.07	480.91	0.40	0.40	0.40
LST Removal	0.26	0.96	1.91	0.00	0.09	0.08	328.47	0.40	0.40	0.40
LST Foundation Removal	0.03	0.10	0.19	0.00	0.01	0.01	41.63	0.40	0.40	0.40
Install LST Foundations	1.64	6.67	11.91	0.03	0.39	0.36	3,379.33	0.40	0.40	0.40
LST Steel Haul	0.27	0.86	2.21	0.00	0.07	0.07	424.37	0.40	0.40	0.40
LST Steel Assembly	4.18	18.83	31.51	0.05	1.51	1.39	5,066.09	0.40	0.40	0.40
LST Erection	1.98	7.15	15.57	0.03	0.69	0.63	2,455.09	0.40	0.40	0.40
Install TSP Foundations	0.98	3.86	7.29	0.02	0.24	0.22	1,911.12	0.40	0.40	0.40
TSP Haul	0.04	0.14	0.34	0.00	0.01	0.01	58.12	0.40	0.40	0.40
TSP Assembly	0.10	0.37	0.74	0.00	0.04	0.03	116.69	0.40	0.40	0.40
TSP Erection	0.10	0.37	0.74	0.00	0.04	0.03	116.69	0.40	0.40	0.40
Install Conductor	2.23	8.36	19.92	0.04	0.67	0.62	3,894.68	0.40	0.40	0.40
Guard Structure Removal	0.06	0.26	0.52	0.00	0.02	0.02	85.27	0.40	0.40	0.40
115 kV Pole Removal	0.01	0.03	0.08	0.00	0.00	0.00	13.63	0.40	0.40	0.40
Install TSP Riser Foundations	0.07	0.26	0.49	0.00	0.02	0.02	129.98	0.40	0.40	0.40
TSP Riser Haul	0.00	0.01	0.03	0.00	0.00	0.00	5.81	0.40	0.40	0.40
TSP Riser Assembly	0.05	0.19	0.37	0.00	0.02	0.02	58.35	0.40	0.40	0.40
TSP Riser Erection	0.05	0.19	0.37	0.00	0.02	0.02	58.35	0.40	0.40	0.40
Vault Installation	0.05	0.24	0.38	0.00	0.02	0.01	71.40	0.40	0.40	0.40



**Table 8**

**Total Off-Road Construction Equipment Emissions Summary with Alternative Transmission Segment 9**

**Total Off-Road Construction Equipment Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Duct Bank Installation	0.02	0.13	0.13	0.00	0.01	0.01	21.33	0.40	0.40	0.40
Install Underground Cable	0.08	0.35	0.86	0.00	0.03	0.02	183.72	0.40	0.40	0.40
Restoration	0.19	1.09	1.24	0.00	0.09	0.08	174.35	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 2/Segment 8)</b>										
Install Cable	0.03	0.12	0.32	0.00	0.01	0.01	61.79	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Underground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.70	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>										
Install Cable	0.01	0.05	0.13	0.00	0.00	0.00	25.75	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.01	0.02	0.00	0.00	0.00	4.85	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>										
Install Cable	0.02	0.08	0.22	0.00	0.01	0.01	42.91	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.03	0.00	0.00	0.00	7.62	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>										
Install Cable	0.02	0.10	0.28	0.00	0.01	0.01	54.93	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.70	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>										
Install Cable	0.02	0.07	0.18	0.00	0.01	0.00	34.33	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.00	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>										
Install 5 Foot Crossarm	0.00	0.01	0.03	0.00	0.00	0.00	5.15	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.00	0.00	3.43	1.00	0.00	0.00
Install Cable	0.03	0.11	0.31	0.00	0.01	0.01	60.08	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Underground Conduit from Pole to Pole	0.00	0.01	0.03	0.00	0.00	0.00	6.23	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>										
Install 5 Foot Crossarm	0.02	0.07	0.18	0.00	0.01	0.00	34.33	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.07	0.16	0.00	0.00	0.00	36.98	1.00	0.00	0.00
Install Down Guys	0.00	0.00	0.01	0.00	0.00	0.00	2.57	1.00	0.00	0.00
Install Cable	0.01	0.06	0.16	0.00	0.00	0.00	30.90	1.00	0.00	0.00

**Table 8**

**Total Off-Road Construction Equipment Emissions Summary with Alternative Transmission Segment 9**

**Total Off-Road Construction Equipment Emissions by Construction Activity**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction of Total Emissions		
								Months 1-2	Months 13-24	Months 19-30
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.04	0.08	0.00	0.00	0.00	17.32	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>										
All	0.01	0.05	0.09	0.00	0.00	0.00	23.46	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>										
Months 1-12	13.60	54.57	106.01	0.21	4.12	3.79	20,553.20			
Months 13-24	7.38	29.94	57.15	0.11	2.34	2.16	11,117.80			
Months 19-30	6.82	26.99	53.80	0.10	2.16	1.99	10,148.47			
<b>12-Month Maximum</b>	<b>13.60</b>	<b>54.57</b>	<b>106.01</b>	<b>0.21</b>	<b>4.12</b>	<b>3.79</b>	<b>20,553.20</b>			
<b>Total GHG Emissions (metric tons)</b>							<b>33,468.66</b>			

**Table 9**  
**Total Construction Emissions Summary with Alternative Transmission Segment 9**

**Total Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>											
Survey	0.00	0.00	0.00	0.00	0.07	0.01	0.68	0.000	1.00	0.00	0.00
Grading	0.96	4.03	10.57	0.02	445.31	126.50	1,936.17	0.000	1.00	0.00	0.00
Perimeter Wall	0.06	0.43	0.52	0.00	1.13	0.14	203.77	0.000	1.00	0.00	0.00
Water Well	0.02	0.16	0.14	0.00	0.54	0.06	70.96	0.000	1.00	0.00	0.00
Civil	0.12	0.80	4.18	0.01	24.11	2.60	908.53	0.000	1.00	0.00	0.00
Electrical	0.01	0.05	0.06	0.00	0.06	0.01	10.26	0.000	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.16	0.02	7.43	0.000	1.00	0.00	0.00
MEER	0.01	0.11	0.04	0.00	0.34	0.04	18.75	0.000	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.09	0.01	3.32	0.000	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.07	0.01	5.75	0.000	1.00	0.00	0.00
Asphalting	0.10	0.51	1.92	0.00	7.86	0.86	374.47	0.000	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>											
Survey	0.00	0.11	0.01	0.00	0.30	0.04	15.57	0.000	0.00	1.00	0.00
Civil	0.78	4.41	6.27	0.02	10.77	1.43	1,594.62	0.000	0.00	1.00	0.00
Electrical	0.19	1.41	1.36	0.00	1.09	0.22	246.08	0.000	0.00	0.67	0.67
Wiring	0.00	0.07	0.01	0.00	0.21	0.03	9.91	0.000	0.00	0.67	0.67
Control Room	0.01	0.14	0.06	0.00	0.35	0.05	24.75	0.000	0.00	0.67	0.67
Maintenance	0.00	0.06	0.01	0.00	0.24	0.03	8.29	0.000	0.00	0.67	0.67
Asphalting	0.10	0.41	1.11	0.00	2.19	0.26	188.30	0.000	0.00	0.00	1.00
Transformer Assembly	0.09	0.63	0.68	0.00	0.50	0.10	135.09	0.000	0.00	0.67	0.67
Testing	0.01	0.39	0.04	0.00	0.50	0.09	55.34	0.000	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>											
Overhead Construction	0.00	0.03	0.04	0.00	0.05	0.01	13.31	0.000	1.00	0.00	0.00
Underground Civil Construction	0.01	0.03	0.05	0.00	0.05	0.01	11.87	0.000	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.04	0.01	7.70	0.000	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.000	1.00	0.00	0.00
Civil	0.11	0.65	0.78	0.00	0.10	0.05	184.00	0.000	1.00	0.00	0.00
Electrical	0.06	0.34	0.50	0.00	0.08	0.04	84.18	0.000	1.00	0.00	0.00
Wiring	0.00	0.02	0.00	0.00	0.01	0.00	2.49	0.000	1.00	0.00	0.00
MEER	0.01	0.06	0.04	0.00	0.03	0.01	12.10	0.000	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	0.000	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	0.000	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.000	1.00	0.00	0.00
Civil	0.20	1.17	1.37	0.00	0.19	0.09	342.12	0.000	1.00	0.00	0.00

**Table 9  
Total Construction Emissions Summary with Alternative Transmission Segment 9**

**Total Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Electrical	0.09	0.52	0.71	0.00	0.13	0.06	124.34	0.000	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.04	0.01	7.40	0.000	1.00	0.00	0.00
Control Room	0.01	0.07	0.05	0.00	0.03	0.01	14.83	0.000	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	0.000	1.00	0.00	0.00
Transformer Assembly	0.08	0.48	0.60	0.00	0.10	0.04	103.59	0.000	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	0.000	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>											
Survey	0.01	0.16	0.02	0.00	4.80	0.49	22.91	0.349	1.00	0.00	0.00
Construction and Materials Yards	3.60	16.40	31.77	0.07	5.19	1.93	6,520.20	0.000	0.40	0.40	0.40
Right-of-Way Clearing	0.66	3.07	5.07	0.01	271.22	85.98	1,071.40	0.349	1.00	0.00	0.00
Roads and Landing Work	1.49	5.78	11.61	0.02	464.87	143.17	2,309.00	0.349	1.00	0.00	0.00
Retaining Wall Installation	2.40	12.20	20.96	0.05	230.47	23.82	4,676.57	0.349	1.00	0.00	0.00
Wet Crossing Installation	1.30	6.64	11.68	0.03	131.30	13.58	2,355.94	0.349	1.00	0.00	0.00
Guard Structure Installation	0.12	0.59	0.97	0.00	9.58	1.00	245.02	0.349	0.40	0.40	0.40
Remove Existing Conductor & GW	0.25	1.22	2.59	0.01	22.62	2.35	563.41	0.349	0.40	0.40	0.40
LST Removal	0.27	1.09	1.97	0.00	6.95	0.78	358.39	0.349	0.40	0.40	0.40
LST Foundation Removal	0.03	0.14	0.21	0.00	0.80	0.09	48.29	0.349	0.40	0.40	0.40
Install LST Foundations	1.96	9.20	18.76	0.44	330.85	33.89	5,059.69	0.349	0.40	0.40	0.40
LST Steel Haul	0.94	2.16	6.23	2.01	29.95	3.19	1,586.92	0.349	0.40	0.40	0.40
LST Steel Assembly	6.35	26.75	45.17	6.63	107.02	12.77	9,366.20	0.349	0.40	0.40	0.40
LST Erection	8.48	19.87	40.95	10.92	138.31	15.34	9,027.25	0.349	0.40	0.40	0.40
Install TSP Foundations	1.08	5.18	9.93	0.03	157.66	16.14	2,585.63	0.349	0.40	0.40	0.40
TSP Haul	0.05	0.22	0.42	0.00	8.19	0.84	83.32	0.349	0.40	0.40	0.40
TSP Assembly	0.11	0.55	0.81	0.00	10.75	1.12	153.21	0.349	0.40	0.40	0.40
TSP Erection	0.10	0.54	0.78	0.00	7.67	0.81	145.70	0.349	0.40	0.40	0.40
Install Conductor	5.49	19.58	24.30	2.55	142.03	15.55	6,508.79	0.349	0.40	0.40	0.40
Guard Structure Removal	0.07	0.34	0.56	0.00	6.56	0.68	101.26	0.349	0.40	0.40	0.40
115 kV Pole Removal	0.01	0.04	0.08	0.00	0.69	0.07	15.66	0.349	0.40	0.40	0.40
Install TSP Riser Foundations	0.08	0.42	0.82	0.00	17.22	1.76	212.83	0.349	0.40	0.40	0.40
TSP Riser Haul	0.00	0.02	0.04	0.00	0.82	0.08	8.33	0.349	0.40	0.40	0.40
TSP Riser Assembly	0.05	0.27	0.41	0.00	5.37	0.56	76.61	0.349	0.40	0.40	0.40
TSP Riser Erection	0.05	0.27	0.39	0.00	3.84	0.41	72.85	0.349	0.40	0.40	0.40
Vault Installation	0.06	0.32	0.51	0.00	10.37	1.06	106.76	0.349	0.40	0.40	0.40
Duct Bank Installation	0.02	0.20	0.25	0.00	10.40	1.06	55.07	0.349	0.40	0.40	0.40
Install Underground Cable	0.09	0.43	0.98	0.00	11.01	1.13	216.58	0.349	0.40	0.40	0.40
Restoration	0.20	1.33	1.33	0.00	100.98	31.13	223.00	0.349	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 2/Segment 8)</b>											

**Table 9**  
**Total Construction Emissions Summary with Alternative Transmission Segment 9**

**Total Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Install Cable	0.03	0.14	0.33	0.00	0.45	0.05	66.73	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.000	1.00	0.00	0.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.18	0.02	12.27	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>											
Install Cable	0.01	0.06	0.14	0.00	0.19	0.02	27.80	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.03	0.00	0.11	0.01	6.56	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>											
Install Cable	0.02	0.10	0.23	0.00	0.16	0.02	46.14	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.04	0.00	0.09	0.01	10.26	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>											
Install Cable	0.03	0.14	0.29	0.00	0.17	0.03	60.35	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.33	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.09	0.01	13.10	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>											
Install Cable	0.02	0.09	0.18	0.00	0.11	0.02	37.72	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.33	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.08	0.01	11.63	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>											
Install 5 Foot Crossarm	0.00	0.02	0.03	0.00	0.08	0.01	6.39	0.000	1.00	0.00	0.00
Install Down Guys	0.00	0.02	0.02	0.00	0.06	0.01	4.93	0.000	1.00	0.00	0.00
Install Cable	0.03	0.14	0.32	0.00	0.43	0.05	64.46	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.05	0.00	0.72	0.000	1.00	0.00	0.00
Underground Conduit from Pole to Pole	0.00	0.02	0.03	0.00	0.11	0.01	8.16	0.000	1.00	0.00	0.00
Restoration	0.00	0.01	0.00	0.00	0.07	0.01	1.29	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>											
Install 5 Foot Crossarm	0.02	0.09	0.19	0.00	0.02	0.01	39.90	0.198	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.09	0.17	0.00	0.02	0.01	41.02	0.198	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.01	0.00	3.93	0.198	1.00	0.00	0.00
Install Cable	0.01	0.08	0.17	0.00	0.02	0.01	36.10	0.198	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.02	0.00	0.00	0.02	0.00	3.53	0.198	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.06	0.09	0.00	0.03	0.01	22.55	0.198	1.00	0.00	0.00
Restoration	0.00	0.02	0.01	0.00	0.01	0.00	3.69	0.198	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>											
All	0.01	0.08	0.09	0.00	0.02	0.01	27.81	0.000	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>											

**Table 9**  
**Total Construction Emissions Summary with Alternative Transmission Segment 9**

**Total Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Months 1-12	5.63	22.27	39.28	3.20	529.85	108.66	8,780.99				
Months 13-24	3.62	12.79	22.25	3.16	168.61	22.73	5,161.19				
Months 19-30	3.62	12.79	22.25	3.16	168.61	22.73	5,161.19				
<b>12-Month Maximum</b>	<b>5.63</b>	<b>22.27</b>	<b>39.28</b>	<b>3.20</b>	<b>529.85</b>	<b>108.66</b>	<b>8,780.99</b>				
<b>Total GHG Emissions (metric tons)</b>							<b>55,412.50</b>				

**Table 10**  
**Total Off-Road Construction Equipment Emissions Summary with Alternative Transmission Segment 9**

**Total Off-Road Construction Equipment Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Grading	0.85	3.12	6.80	0.01	0.26	0.24	1,092.04	0.000	1.00	0.00	0.00
Perimeter Wall	0.06	0.33	0.36	0.00	0.01	0.01	160.94	0.000	1.00	0.00	0.00
Water Well	0.02	0.11	0.12	0.00	0.00	0.00	62.74	0.000	1.00	0.00	0.00
Civil	0.02	0.07	0.10	0.00	0.01	0.00	24.90	0.000	1.00	0.00	0.00
Electrical	0.01	0.03	0.06	0.00	0.00	0.00	7.78	0.000	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	0.000	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Asphalting	0.07	0.26	0.61	0.00	0.02	0.02	87.66	0.000	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	1.00	0.00
Civil	0.73	3.64	5.07	0.01	0.24	0.22	1,267.98	0.000	0.00	1.00	0.00
Electrical	0.18	0.94	1.31	0.00	0.08	0.08	180.29	0.000	0.00	0.67	0.67
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.67	0.67
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	0.000	0.00	0.67	0.67
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.67	0.67
Asphalting	0.09	0.32	0.76	0.00	0.03	0.03	109.57	0.000	0.00	0.00	1.00
Transformer Assembly	0.08	0.36	0.65	0.00	0.03	0.03	98.12	0.000	0.00	0.67	0.67
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>											
Overhead Construction	0.00	0.02	0.04	0.00	0.00	0.00	12.68	0.000	1.00	0.00	0.00
Underground Civil Construction	0.01	0.02	0.04	0.00	0.00	0.00	10.39	0.000	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.00	0.00	7.27	0.000	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Civil	0.11	0.57	0.73	0.00	0.04	0.04	163.64	0.000	1.00	0.00	0.00
Electrical	0.06	0.26	0.49	0.00	0.02	0.02	72.67	0.000	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	0.000	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Civil	0.19	1.01	1.27	0.00	0.07	0.06	304.10	0.000	1.00	0.00	0.00
Electrical	0.09	0.38	0.70	0.00	0.03	0.03	103.81	0.000	1.00	0.00	0.00

**Table 10**  
**Total Off-Road Construction Equipment Emissions Summary with Alternative Transmission Segment 9**

**Total Off-Road Construction Equipment Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	0.000	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Transformer Assembly	0.08	0.37	0.59	0.00	0.03	0.03	88.72	0.000	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.349	1.00	0.00	0.00
Construction and Materials Yards	3.31	10.95	25.97	0.05	0.92	0.84	4,736.74	0.000	0.40	0.40	0.40
Right-of-Way Clearing	0.63	2.25	4.84	0.01	0.18	0.16	926.78	0.349	1.00	0.00	0.00
Roads and Landing Work	1.46	5.08	11.25	0.02	0.41	0.37	2,154.97	0.349	1.00	0.00	0.00
Retaining Wall Installation	2.25	10.13	17.26	0.04	0.65	0.60	3,707.32	0.349	1.00	0.00	0.00
Wet Crossing Installation	1.20	5.23	9.26	0.02	0.36	0.33	1,712.79	0.349	1.00	0.00	0.00
Guard Structure Installation	0.11	0.49	0.88	0.00	0.03	0.03	214.70	0.349	0.40	0.40	0.40
Remove Existing Conductor & GW	0.23	0.94	2.36	0.00	0.07	0.07	480.91	0.349	0.40	0.40	0.40
LST Removal	0.26	0.96	1.91	0.00	0.09	0.08	328.47	0.349	0.40	0.40	0.40
LST Foundation Removal	0.03	0.10	0.19	0.00	0.01	0.01	41.63	0.349	0.40	0.40	0.40
Install LST Foundations	1.64	6.67	11.91	0.03	0.39	0.36	3,379.33	0.349	0.40	0.40	0.40
LST Steel Haul	0.27	0.86	2.21	0.00	0.07	0.07	424.37	0.349	0.40	0.40	0.40
LST Steel Assembly	4.18	18.83	31.51	0.05	1.51	1.39	5,066.09	0.349	0.40	0.40	0.40
LST Erection	1.98	7.15	15.57	0.03	0.69	0.63	2,455.09	0.349	0.40	0.40	0.40
Install TSP Foundations	0.98	3.86	7.29	0.02	0.24	0.22	1,911.12	0.349	0.40	0.40	0.40
TSP Haul	0.04	0.14	0.34	0.00	0.01	0.01	58.12	0.349	0.40	0.40	0.40
TSP Assembly	0.10	0.37	0.74	0.00	0.04	0.03	116.69	0.349	0.40	0.40	0.40
TSP Erection	0.10	0.37	0.74	0.00	0.04	0.03	116.69	0.349	0.40	0.40	0.40
Install Conductor	2.23	8.36	19.92	0.04	0.67	0.62	3,894.68	0.349	0.40	0.40	0.40
Guard Structure Removal	0.06	0.26	0.52	0.00	0.02	0.02	85.27	0.349	0.40	0.40	0.40
115 kV Pole Removal	0.01	0.03	0.08	0.00	0.00	0.00	13.63	0.349	0.40	0.40	0.40
Install TSP Riser Foundations	0.07	0.26	0.49	0.00	0.02	0.02	129.98	0.349	0.40	0.40	0.40
TSP Riser Haul	0.00	0.01	0.03	0.00	0.00	0.00	5.81	0.349	0.40	0.40	0.40
TSP Riser Assembly	0.05	0.19	0.37	0.00	0.02	0.02	58.35	0.349	0.40	0.40	0.40
TSP Riser Erection	0.05	0.19	0.37	0.00	0.02	0.02	58.35	0.349	0.40	0.40	0.40
Vault Installation	0.05	0.24	0.38	0.00	0.02	0.01	71.40	0.349	0.40	0.40	0.40
Duct Bank Installation	0.02	0.13	0.13	0.00	0.01	0.01	21.33	0.349	0.40	0.40	0.40
Install Underground Cable	0.08	0.35	0.86	0.00	0.03	0.02	183.72	0.349	0.40	0.40	0.40
Restoration	0.19	1.09	1.24	0.00	0.09	0.08	174.35	0.349	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 2/Segment 8)</b>											
Install Cable	0.03	0.12	0.32	0.00	0.01	0.01	61.79	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00



**Table 10**  
**Total Off-Road Construction Equipment Emissions Summary with Alternative Transmission Segment 9**

**Total Off-Road Construction Equipment Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Underground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.70	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>											
Install Cable	0.01	0.05	0.13	0.00	0.00	0.00	25.75	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.01	0.02	0.00	0.00	0.00	4.85	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>											
Install Cable	0.02	0.08	0.22	0.00	0.01	0.01	42.91	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.03	0.00	0.00	0.00	7.62	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>											
Install Cable	0.02	0.10	0.28	0.00	0.01	0.01	54.93	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.70	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>											
Install Cable	0.02	0.07	0.18	0.00	0.01	0.00	34.33	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.00	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>											
Install 5 Foot Crossarm	0.00	0.01	0.03	0.00	0.00	0.00	5.15	0.000	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.00	0.00	3.43	0.000	1.00	0.00	0.00
Install Cable	0.03	0.11	0.31	0.00	0.01	0.01	60.08	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Underground Conduit from Pole to Pole	0.00	0.01	0.03	0.00	0.00	0.00	6.23	0.000	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>											
Install 5 Foot Crossarm	0.02	0.07	0.18	0.00	0.01	0.00	34.33	0.198	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.07	0.16	0.00	0.00	0.00	36.98	0.198	1.00	0.00	0.00
Install Down Guys	0.00	0.00	0.01	0.00	0.00	0.00	2.57	0.198	1.00	0.00	0.00
Install Cable	0.01	0.06	0.16	0.00	0.00	0.00	30.90	0.198	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.198	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.04	0.08	0.00	0.00	0.00	17.32	0.198	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.198	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>											
All	0.01	0.05	0.09	0.00	0.00	0.00	23.46	0.000	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>											
Months 1-12	3.70	15.05	28.78	0.06	1.12	1.03	5,659.88				
Months 13-24	1.79	7.34	14.08	0.03	0.58	0.53	2,709.33				
Months 19-30	1.79	7.34	14.08	0.03	0.58	0.53	2,709.33				

**Table 10**

**Total Off-Road Construction Equipment Emissions Summary with Alternative Transmission Segment 9**

**Total Off-Road Construction Equipment Emissions by Construction Activity on BLM Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on BLM Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
12-Month Maximum	3.70	15.05	28.78	0.06	1.12	1.03	5,659.88				
Total GHG Emissions (metric tons)							33,468.66				

**Table 11**  
**Total Construction Emissions Summary with Alternative Transmission Segment 9**

**Total Emissions by Construction Activity on DOD Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on DOD Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>											
Survey	0.00	0.00	0.00	0.00	0.07	0.01	0.68	0.000	1.00	0.00	0.00
Grading	0.96	4.03	10.57	0.02	445.31	126.50	1,936.17	0.000	1.00	0.00	0.00
Perimeter Wall	0.06	0.43	0.52	0.00	1.13	0.14	203.77	0.000	1.00	0.00	0.00
Water Well	0.02	0.16	0.14	0.00	0.54	0.06	70.96	0.000	1.00	0.00	0.00
Civil	0.12	0.80	4.18	0.01	24.11	2.60	908.53	0.000	1.00	0.00	0.00
Electrical	0.01	0.05	0.06	0.00	0.06	0.01	10.26	0.000	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.16	0.02	7.43	0.000	1.00	0.00	0.00
MEER	0.01	0.11	0.04	0.00	0.34	0.04	18.75	0.000	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.09	0.01	3.32	0.000	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.07	0.01	5.75	0.000	1.00	0.00	0.00
Asphalting	0.10	0.51	1.92	0.00	7.86	0.86	374.47	0.000	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>											
Survey	0.00	0.11	0.01	0.00	0.30	0.04	15.57	0.000	0.00	1.00	0.00
Civil	0.78	4.41	6.27	0.02	10.77	1.43	1,594.62	0.000	0.00	1.00	0.00
Electrical	0.19	1.41	1.36	0.00	1.09	0.22	246.08	0.000	0.00	0.67	0.67
Wiring	0.00	0.07	0.01	0.00	0.21	0.03	9.91	0.000	0.00	0.67	0.67
Control Room	0.01	0.14	0.06	0.00	0.35	0.05	24.75	0.000	0.00	0.67	0.67
Maintenance	0.00	0.06	0.01	0.00	0.24	0.03	8.29	0.000	0.00	0.67	0.67
Asphalting	0.10	0.41	1.11	0.00	2.19	0.26	188.30	0.000	0.00	0.00	1.00
Transformer Assembly	0.09	0.63	0.68	0.00	0.50	0.10	135.09	0.000	0.00	0.67	0.67
Testing	0.01	0.39	0.04	0.00	0.50	0.09	55.34	0.000	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>											
Overhead Construction	0.00	0.03	0.04	0.00	0.05	0.01	13.31	0.000	1.00	0.00	0.00
Underground Civil Construction	0.01	0.03	0.05	0.00	0.05	0.01	11.87	0.000	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.04	0.01	7.70	0.000	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.000	1.00	0.00	0.00
Civil	0.11	0.65	0.78	0.00	0.10	0.05	184.00	0.000	1.00	0.00	0.00
Electrical	0.06	0.34	0.50	0.00	0.08	0.04	84.18	0.000	1.00	0.00	0.00
Wiring	0.00	0.02	0.00	0.00	0.01	0.00	2.49	0.000	1.00	0.00	0.00
MEER	0.01	0.06	0.04	0.00	0.03	0.01	12.10	0.000	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	0.000	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	0.000	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.000	1.00	0.00	0.00
Civil	0.20	1.17	1.37	0.00	0.19	0.09	342.12	0.000	1.00	0.00	0.00

**Table 11  
Total Construction Emissions Summary with Alternative Transmission Segment 9**

**Total Emissions by Construction Activity on DOD Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on DOD Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Electrical	0.09	0.52	0.71	0.00	0.13	0.06	124.34	0.000	1.00	0.00	0.00
Wiring	0.00	0.05	0.01	0.00	0.04	0.01	7.40	0.000	1.00	0.00	0.00
Control Room	0.01	0.07	0.05	0.00	0.03	0.01	14.83	0.000	1.00	0.00	0.00
Maintenance	0.00	0.02	0.00	0.00	0.02	0.00	3.29	0.000	1.00	0.00	0.00
Transformer Assembly	0.08	0.48	0.60	0.00	0.10	0.04	103.59	0.000	1.00	0.00	0.00
Testing	0.00	0.04	0.00	0.00	0.03	0.01	5.74	0.000	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>											
Survey	0.01	0.16	0.02	0.00	4.80	0.49	22.91	0.045	1.00	0.00	0.00
Construction and Materials Yards	3.60	16.40	31.77	0.07	5.19	1.93	6,520.20	0.000	0.40	0.40	0.40
Right-of-Way Clearing	0.66	3.07	5.07	0.01	271.22	85.98	1,071.40	0.045	1.00	0.00	0.00
Roads and Landing Work	1.49	5.78	11.61	0.02	464.87	143.17	2,309.00	0.045	1.00	0.00	0.00
Retaining Wall Installation	2.40	12.20	20.96	0.05	230.47	23.82	4,676.57	0.045	1.00	0.00	0.00
Wet Crossing Installation	1.30	6.64	11.68	0.03	131.30	13.58	2,355.94	0.045	1.00	0.00	0.00
Guard Structure Installation	0.12	0.59	0.97	0.00	9.58	1.00	245.02	0.045	0.40	0.40	0.40
Remove Existing Conductor & GW	0.25	1.22	2.59	0.01	22.62	2.35	563.41	0.045	0.40	0.40	0.40
LST Removal	0.27	1.09	1.97	0.00	6.95	0.78	358.39	0.045	0.40	0.40	0.40
LST Foundation Removal	0.03	0.14	0.21	0.00	0.80	0.09	48.29	0.045	0.40	0.40	0.40
Install LST Foundations	1.96	9.20	18.76	0.44	330.85	33.89	5,059.69	0.045	0.40	0.40	0.40
LST Steel Haul	0.94	2.16	6.23	2.01	29.95	3.19	1,586.92	0.045	0.40	0.40	0.40
LST Steel Assembly	6.35	26.75	45.17	6.63	107.02	12.77	9,366.20	0.045	0.40	0.40	0.40
LST Erection	8.48	19.87	40.95	10.92	138.31	15.34	9,027.25	0.045	0.40	0.40	0.40
Install TSP Foundations	1.08	5.18	9.93	0.03	157.66	16.14	2,585.63	0.045	0.40	0.40	0.40
TSP Haul	0.05	0.22	0.42	0.00	8.19	0.84	83.32	0.045	0.40	0.40	0.40
TSP Assembly	0.11	0.55	0.81	0.00	10.75	1.12	153.21	0.045	0.40	0.40	0.40
TSP Erection	0.10	0.54	0.78	0.00	7.67	0.81	145.70	0.045	0.40	0.40	0.40
Install Conductor	5.49	19.58	24.30	2.55	142.03	15.55	6,508.79	0.045	0.40	0.40	0.40
Guard Structure Removal	0.07	0.34	0.56	0.00	6.56	0.68	101.26	0.045	0.40	0.40	0.40
115 kV Pole Removal	0.01	0.04	0.08	0.00	0.69	0.07	15.66	0.045	0.40	0.40	0.40
Install TSP Riser Foundations	0.08	0.42	0.82	0.00	17.22	1.76	212.83	0.045	0.40	0.40	0.40
TSP Riser Haul	0.00	0.02	0.04	0.00	0.82	0.08	8.33	0.045	0.40	0.40	0.40
TSP Riser Assembly	0.05	0.27	0.41	0.00	5.37	0.56	76.61	0.045	0.40	0.40	0.40
TSP Riser Erection	0.05	0.27	0.39	0.00	3.84	0.41	72.85	0.045	0.40	0.40	0.40
Vault Installation	0.06	0.32	0.51	0.00	10.37	1.06	106.76	0.045	0.40	0.40	0.40
Duct Bank Installation	0.02	0.20	0.25	0.00	10.40	1.06	55.07	0.045	0.40	0.40	0.40
Install Underground Cable	0.09	0.43	0.98	0.00	11.01	1.13	216.58	0.045	0.40	0.40	0.40
Restoration	0.20	1.33	1.33	0.00	100.98	31.13	223.00	0.045	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 2/Segment 8)</b>											

**Table 11**  
**Total Construction Emissions Summary with Alternative Transmission Segment 9**

**Total Emissions by Construction Activity on DOD Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on DOD Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Install Cable	0.03	0.14	0.33	0.00	0.45	0.05	66.73	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.000	1.00	0.00	0.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.18	0.02	12.27	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>											
Install Cable	0.01	0.06	0.14	0.00	0.19	0.02	27.80	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.03	0.00	0.11	0.01	6.56	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>											
Install Cable	0.02	0.10	0.23	0.00	0.16	0.02	46.14	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.35	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.04	0.00	0.09	0.01	10.26	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>											
Install Cable	0.03	0.14	0.29	0.00	0.17	0.03	60.35	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.33	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.09	0.01	13.10	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>											
Install Cable	0.02	0.09	0.18	0.00	0.11	0.02	37.72	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.01	0.00	0.33	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.03	0.05	0.00	0.08	0.01	11.63	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>											
Install 5 Foot Crossarm	0.00	0.02	0.03	0.00	0.08	0.01	6.39	0.000	1.00	0.00	0.00
Install Down Guys	0.00	0.02	0.02	0.00	0.06	0.01	4.93	0.000	1.00	0.00	0.00
Install Cable	0.03	0.14	0.32	0.00	0.43	0.05	64.46	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.05	0.00	0.72	0.000	1.00	0.00	0.00
Underground Conduit from Pole to Pole	0.00	0.02	0.03	0.00	0.11	0.01	8.16	0.000	1.00	0.00	0.00
Restoration	0.00	0.01	0.00	0.00	0.07	0.01	1.29	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>											
Install 5 Foot Crossarm	0.02	0.09	0.19	0.00	0.02	0.01	39.90	0.000	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.09	0.17	0.00	0.02	0.01	41.02	0.000	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.01	0.00	3.93	0.000	1.00	0.00	0.00
Install Cable	0.01	0.08	0.17	0.00	0.02	0.01	36.10	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.02	0.00	0.00	0.02	0.00	3.53	0.000	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.06	0.09	0.00	0.03	0.01	22.55	0.000	1.00	0.00	0.00
Restoration	0.00	0.02	0.01	0.00	0.01	0.00	3.69	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>											
All	0.01	0.08	0.09	0.00	0.02	0.01	27.81	0.000	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>											

**Table 11**  
**Total Construction Emissions Summary with Alternative Transmission Segment 9**

**Total Emissions by Construction Activity on DOD Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on DOD Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Months 1-12	0.72	2.86	5.05	0.41	68.32	14.01	1,128.37				
Months 13-24	0.47	1.65	2.87	0.41	21.74	2.93	665.48				
Months 19-30	0.47	1.65	2.87	0.41	21.74	2.93	665.48				
<b>12-Month Maximum</b>	<b>0.72</b>	<b>2.86</b>	<b>5.05</b>	<b>0.41</b>	<b>68.32</b>	<b>14.01</b>	<b>1,128.37</b>				
<b>Total GHG Emissions (metric tons)</b>							<b>55,412.50</b>				

**Table 12**  
**Total Off-Road Construction Equipment Emissions Summary with Alternative Transmission Segment 9**

**Total Off-Road Construction Equipment Emissions by Construction Activity on DOD Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on DOD Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
<b>Substation Construction - Initial Build Out</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Grading	0.85	3.12	6.80	0.01	0.26	0.24	1,092.04	0.000	1.00	0.00	0.00
Perimeter Wall	0.06	0.33	0.36	0.00	0.01	0.01	160.94	0.000	1.00	0.00	0.00
Water Well	0.02	0.11	0.12	0.00	0.00	0.00	62.74	0.000	1.00	0.00	0.00
Civil	0.02	0.07	0.10	0.00	0.01	0.00	24.90	0.000	1.00	0.00	0.00
Electrical	0.01	0.03	0.06	0.00	0.00	0.00	7.78	0.000	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	0.000	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Asphalting	0.07	0.26	0.61	0.00	0.02	0.02	87.66	0.000	1.00	0.00	0.00
<b>Substation Construction - Full Build Out</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	1.00	0.00
Civil	0.73	3.64	5.07	0.01	0.24	0.22	1,267.98	0.000	0.00	1.00	0.00
Electrical	0.18	0.94	1.31	0.00	0.08	0.08	180.29	0.000	0.00	0.67	0.67
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.67	0.67
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	0.000	0.00	0.67	0.67
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.67	0.67
Asphalting	0.09	0.32	0.76	0.00	0.03	0.03	109.57	0.000	0.00	0.00	1.00
Transformer Assembly	0.08	0.36	0.65	0.00	0.03	0.03	98.12	0.000	0.00	0.67	0.67
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.67	0.67
<b>Distribution for Station Light &amp; Power</b>											
Overhead Construction	0.00	0.02	0.04	0.00	0.00	0.00	12.68	0.000	1.00	0.00	0.00
Underground Civil Construction	0.01	0.02	0.04	0.00	0.00	0.00	10.39	0.000	1.00	0.00	0.00
Underground Electrical Construction	0.01	0.02	0.04	0.00	0.00	0.00	7.27	0.000	1.00	0.00	0.00
<b>Modifications to Coolwater Switchyard</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Civil	0.11	0.57	0.73	0.00	0.04	0.04	163.64	0.000	1.00	0.00	0.00
Electrical	0.06	0.26	0.49	0.00	0.02	0.02	72.67	0.000	1.00	0.00	0.00
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
MEER	0.00	0.01	0.03	0.00	0.00	0.00	5.45	0.000	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
<b>Modifications to Lugo Substation</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Civil	0.19	1.01	1.27	0.00	0.07	0.06	304.10	0.000	1.00	0.00	0.00
Electrical	0.09	0.38	0.70	0.00	0.03	0.03	103.81	0.000	1.00	0.00	0.00

**Table 12**  
**Total Off-Road Construction Equipment Emissions Summary with Alternative Transmission Segment 9**

**Total Off-Road Construction Equipment Emissions by Construction Activity on DOD Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on DOD Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Wiring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Control Room	0.01	0.02	0.05	0.00	0.00	0.00	8.17	0.000	1.00	0.00	0.00
Maintenance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Transformer Assembly	0.08	0.37	0.59	0.00	0.03	0.03	88.72	0.000	1.00	0.00	0.00
Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
<b>Transmission and Subtransmission Construction</b>											
Survey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.045	1.00	0.00	0.00
Construction and Materials Yards	3.31	10.95	25.97	0.05	0.92	0.84	4,736.74	0.000	0.40	0.40	0.40
Right-of-Way Clearing	0.63	2.25	4.84	0.01	0.18	0.16	926.78	0.045	1.00	0.00	0.00
Roads and Landing Work	1.46	5.08	11.25	0.02	0.41	0.37	2,154.97	0.045	1.00	0.00	0.00
Retaining Wall Installation	2.25	10.13	17.26	0.04	0.65	0.60	3,707.32	0.045	1.00	0.00	0.00
Wet Crossing Installation	1.20	5.23	9.26	0.02	0.36	0.33	1,712.79	0.045	1.00	0.00	0.00
Guard Structure Installation	0.11	0.49	0.88	0.00	0.03	0.03	214.70	0.045	0.40	0.40	0.40
Remove Existing Conductor & GW	0.23	0.94	2.36	0.00	0.07	0.07	480.91	0.045	0.40	0.40	0.40
LST Removal	0.26	0.96	1.91	0.00	0.09	0.08	328.47	0.045	0.40	0.40	0.40
LST Foundation Removal	0.03	0.10	0.19	0.00	0.01	0.01	41.63	0.045	0.40	0.40	0.40
Install LST Foundations	1.64	6.67	11.91	0.03	0.39	0.36	3,379.33	0.045	0.40	0.40	0.40
LST Steel Haul	0.27	0.86	2.21	0.00	0.07	0.07	424.37	0.045	0.40	0.40	0.40
LST Steel Assembly	4.18	18.83	31.51	0.05	1.51	1.39	5,066.09	0.045	0.40	0.40	0.40
LST Erection	1.98	7.15	15.57	0.03	0.69	0.63	2,455.09	0.045	0.40	0.40	0.40
Install TSP Foundations	0.98	3.86	7.29	0.02	0.24	0.22	1,911.12	0.045	0.40	0.40	0.40
TSP Haul	0.04	0.14	0.34	0.00	0.01	0.01	58.12	0.045	0.40	0.40	0.40
TSP Assembly	0.10	0.37	0.74	0.00	0.04	0.03	116.69	0.045	0.40	0.40	0.40
TSP Erection	0.10	0.37	0.74	0.00	0.04	0.03	116.69	0.045	0.40	0.40	0.40
Install Conductor	2.23	8.36	19.92	0.04	0.67	0.62	3,894.68	0.045	0.40	0.40	0.40
Guard Structure Removal	0.06	0.26	0.52	0.00	0.02	0.02	85.27	0.045	0.40	0.40	0.40
115 kV Pole Removal	0.01	0.03	0.08	0.00	0.00	0.00	13.63	0.045	0.40	0.40	0.40
Install TSP Riser Foundations	0.07	0.26	0.49	0.00	0.02	0.02	129.98	0.045	0.40	0.40	0.40
TSP Riser Haul	0.00	0.01	0.03	0.00	0.00	0.00	5.81	0.045	0.40	0.40	0.40
TSP Riser Assembly	0.05	0.19	0.37	0.00	0.02	0.02	58.35	0.045	0.40	0.40	0.40
TSP Riser Erection	0.05	0.19	0.37	0.00	0.02	0.02	58.35	0.045	0.40	0.40	0.40
Vault Installation	0.05	0.24	0.38	0.00	0.02	0.01	71.40	0.045	0.40	0.40	0.40
Duct Bank Installation	0.02	0.13	0.13	0.00	0.01	0.01	21.33	0.045	0.40	0.40	0.40
Install Underground Cable	0.08	0.35	0.86	0.00	0.03	0.02	183.72	0.045	0.40	0.40	0.40
Restoration	0.19	1.09	1.24	0.00	0.09	0.08	174.35	0.045	0.00	0.67	0.67
<b>Telecommunications Construction, LADWP Corridor Underground Crossing (Segment 2/Segment 8)</b>											
Install Cable	0.03	0.12	0.32	0.00	0.01	0.01	61.79	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00



**Table 12**  
**Total Off-Road Construction Equipment Emissions Summary with Alternative Transmission Segment 9**

**Total Off-Road Construction Equipment Emissions by Construction Activity on DOD Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on DOD Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
Underground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.70	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, OPGW Underground Crossing near Highway 47 (Segment 5)</b>											
Install Cable	0.01	0.05	0.13	0.00	0.00	0.00	25.75	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.01	0.02	0.00	0.00	0.00	4.85	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW Underground Crossing near SR-18 (Segment 5)</b>											
Install Cable	0.02	0.08	0.22	0.00	0.01	0.01	42.91	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.00	0.02	0.03	0.00	0.00	0.00	7.62	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, OPGW from Last Transmission Towers to Desert View Substation Wall</b>											
Install Cable	0.02	0.10	0.28	0.00	0.01	0.01	54.93	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.70	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, 220 kV/500 kV Towers to Desert View Substation</b>											
Install Cable	0.02	0.07	0.18	0.00	0.01	0.00	34.33	0.000	0.00	0.00	1.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	1.00
Underground Conduit and Structures	0.01	0.02	0.04	0.00	0.00	0.00	9.00	0.000	0.00	0.00	1.00
<b>Telecommunications Construction, Apple Valley to Desert View Substation</b>											
Install 5 Foot Crossarm	0.00	0.01	0.03	0.00	0.00	0.00	5.15	0.000	1.00	0.00	0.00
Install Down Guys	0.00	0.01	0.02	0.00	0.00	0.00	3.43	0.000	1.00	0.00	0.00
Install Cable	0.03	0.11	0.31	0.00	0.01	0.01	60.08	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Underground Conduit from Pole to Pole	0.00	0.01	0.03	0.00	0.00	0.00	6.23	0.000	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, Gale to Pisgah Fiber Optic Cable</b>											
Install 5 Foot Crossarm	0.02	0.07	0.18	0.00	0.01	0.00	34.33	0.000	1.00	0.00	0.00
Replacement Wood Pole Haul/Install	0.02	0.07	0.16	0.00	0.00	0.00	36.98	0.000	1.00	0.00	0.00
Install Down Guys	0.00	0.00	0.01	0.00	0.00	0.00	2.57	0.000	1.00	0.00	0.00
Install Cable	0.01	0.06	0.16	0.00	0.00	0.00	30.90	0.000	1.00	0.00	0.00
Splice Fiber Optic Cable	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
Underground Conduit & Structures	0.01	0.04	0.08	0.00	0.00	0.00	17.32	0.000	1.00	0.00	0.00
Restoration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	1.00	0.00	0.00
<b>Telecommunications Construction, Coolwater Microwave Tower</b>											
All	0.01	0.05	0.09	0.00	0.00	0.00	23.46	0.000	1.00	0.00	0.00
<b>Totals by 12-Month Period</b>											
Months 1-12	0.48	1.93	3.70	0.01	0.14	0.13	726.67				
Months 13-24	0.23	0.95	1.82	0.00	0.07	0.07	349.34				
Months 19-30	0.23	0.95	1.82	0.00	0.07	0.07	349.34				

**Table 12**

**Total Off-Road Construction Equipment Emissions Summary with Alternative Transmission Segment 9**

**Total Off-Road Construction Equipment Emissions by Construction Activity on DOD Land**

Activity	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)	Fraction on DOD Land	Fraction of Total Emissions		
									Months 1-2	Months 13-24	Months 19-30
12-Month Maximum	0.48	1.93	3.70	0.01	0.14	0.13	726.67				
<b>Total GHG Emissions (metric tons)</b>							<b>33,468.66</b>				

**Table 13**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Grading**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	14.21	52.08	113.36	0.18	4.36	4.01	18,200.6
Onsite Motor Vehicle Exhaust	0.02	0.15	0.86	0.00	0.03	0.01	173.6
Onsite Motor Vehicle Fugitive PM	--	--	--	--	46.67	4.67	
Earthwork Fugitive PM	--	--	--	--	7135.74	2073.05	
<b>Onsite Total</b>	<b>14.24</b>	<b>52.23</b>	<b>114.22</b>	<b>0.18</b>	<b>7186.80</b>	<b>2081.75</b>	<b>18374.2</b>
Offsite Motor Vehicle Exhaust	1.72	14.94	61.96	0.14	2.11	1.12	13,895.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	257.80	27.93	
<b>Offsite Total</b>	<b>1.72</b>	<b>14.94</b>	<b>61.96</b>	<b>0.14</b>	<b>259.91</b>	<b>29.06</b>	<b>13895.2</b>
<b>Total</b>	<b>15.96</b>	<b>67.17</b>	<b>176.18</b>	<b>0.32</b>	<b>7446.71</b>	<b>2110.80</b>	<b>32269.4</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.85	3.12	6.80	0.01	0.26	0.24	1,092.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.05	0.00	0.00	0.00	10.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	2.80	0.28	
Earthwork Fugitive PM	--	--	--	--	428.14	124.38	
<b>Onsite Total</b>	<b>0.85</b>	<b>3.13</b>	<b>6.85</b>	<b>0.01</b>	<b>431.21</b>	<b>124.90</b>	<b>1102.5</b>
Offsite Motor Vehicle Exhaust	0.10	0.90	3.72	0.01	0.13	0.07	833.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	13.98	1.53	
<b>Offsite Total</b>	<b>0.10</b>	<b>0.90</b>	<b>3.72</b>	<b>0.01</b>	<b>14.11</b>	<b>1.59</b>	<b>833.7</b>
<b>Total</b>	<b>0.96</b>	<b>4.03</b>	<b>10.57</b>	<b>0.02</b>	<b>445.31</b>	<b>126.50</b>	<b>1936.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
980 Loader	400	2	120	8
Grader/Blade	400	2	120	8
Compactor	100	1	120	5
Earth Mover	400	4	120	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
980 Loader	400	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Grader/Blade	400	0.158	0.552	1.238	0.002	0.045	0.041	229.278	0.014	0.006	Graders
Compactor	100	0.079	0.397	0.511	0.001	0.042	0.038	58.936	0.007	0.002	Rollers
Earth Mover	400	0.273	1.010	2.216	0.003	0.085	0.078	321.140	0.025	0.008	Scrapers

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 13  
Alternative Substation Construction Emissions - Initial Build Out  
Grading**

980 Loader	2.55	8.94	20.10	0.04	0.72	0.66	3788.73	0.23	0.10	3,824.1
Grader/Blade	2.52	8.83	19.80	0.04	0.71	0.66	3668.45	0.23	0.10	3,702.8
Compactor	0.40	1.98	2.55	0.00	0.21	0.19	294.68	0.04	0.01	297.8
Earth Mover	8.75	32.32	70.91	0.10	2.72	2.50	10276.48	0.79	0.27	10,376.0
<b>Total</b>	<b>14.21</b>	<b>52.08</b>	<b>113.36</b>	<b>0.18</b>	<b>4.36</b>	<b>4.01</b>	<b>18028.34</b>	<b>1.28</b>	<b>0.47</b>	<b>18200.64</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
980 Loader	0.15	0.54	1.21	0.00	0.04	0.04	227.32	0.01	0.01	229.4
Grader/Blade	0.15	0.53	1.19	0.00	0.04	0.04	220.11	0.01	0.01	222.2
Compactor	0.02	0.12	0.15	0.00	0.01	0.01	17.68	0.00	0.00	17.9
Earth Mover	0.52	1.94	4.25	0.01	0.16	0.15	616.59	0.05	0.02	622.6
<b>Total</b>	<b>0.85</b>	<b>3.12</b>	<b>6.80</b>	<b>0.01</b>	<b>0.26</b>	<b>0.24</b>	<b>1081.70</b>	<b>0.08</b>	<b>0.03</b>	<b>1092.04</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Water Truck	4	120	N/A	4
Survey Truck	1	120	N/A	4
Soils Test Crew Truck	1	120	N/A	4
Dump Truck	60	120	N/A	0.5
<b>Offsite</b>				
Water Truck	4	120	N/A	28
Dump Truck	60	120	N/A	60
Worker Commute	15	120	N/A	58

<sup>a</sup> Dump trucks based on exporting 100,000 CY over 120 days and 14 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Survey Truck	LHDT	2.79E-04	1.93E-03	1.24E-02	1.10E-05	2.61E-04	5.48E-05	1.12E+00	1.29E-05	3.80E-05
Soils Test Crew Truck	LHDT	2.79E-04	1.93E-03	1.24E-02	1.10E-05	2.61E-04	5.48E-05	1.12E+00	1.29E-05	3.80E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

**Table 13**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Grading**

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Water Truck	0.01	0.05	0.26	0.00	0.01	0.00	56.64	0.00	0.00	57.25
Survey Truck	0.00	0.01	0.05	0.00	0.00	0.00	4.46	0.00	0.00	4.51
Soils Test Crew Truck	0.00	0.01	0.05	0.00	0.00	0.00	4.46	0.00	0.00	4.51
Dump Truck	0.01	0.09	0.50	0.00	0.02	0.01	106.21	0.00	0.00	107.34
<b>Onsite Total</b>	<b>0.02</b>	<b>0.15</b>	<b>0.86</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>171.77</b>	<b>0.00</b>	<b>0.01</b>	<b>173.61</b>
<b>Offsite</b>										
Water Truck	0.05	0.32	1.85	0.00	0.06	0.03	396.51	0.00	0.01	400.74
Dump Truck	1.52	10.25	59.62	0.13	1.95	1.08	12744.91	0.07	0.43	12881.09
Worker Commute	0.15	4.37	0.48	0.01	0.09	0.00	606.44	0.04	0.02	613.36
<b>Offsite Total</b>	<b>1.72</b>	<b>14.94</b>	<b>61.96</b>	<b>0.14</b>	<b>2.11</b>	<b>1.12</b>	<b>13747.86</b>	<b>0.11</b>	<b>0.47</b>	<b>13895.19</b>
<b>Total</b>	<b>1.75</b>	<b>15.09</b>	<b>62.82</b>	<b>0.14</b>	<b>2.13</b>	<b>1.14</b>	<b>13919.63</b>	<b>0.11</b>	<b>0.47</b>	<b>14068.80</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.40	0.00	0.00	3.43
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
Soils Test Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
Dump Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.37	0.00	0.00	6.44
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.31</b>	<b>0.00</b>	<b>0.00</b>	<b>10.42</b>
<b>Offsite</b>										
Water Truck	0.00	0.02	0.11	0.00	0.00	0.00	23.79	0.00	0.00	24.04
Dump Truck	0.09	0.62	3.58	0.01	0.12	0.07	764.69	0.00	0.03	772.87
Worker Commute	0.01	0.26	0.03	0.00	0.01	0.00	36.39	0.00	0.00	36.80
<b>Offsite Total</b>	<b>0.10</b>	<b>0.90</b>	<b>3.72</b>	<b>0.01</b>	<b>0.13</b>	<b>0.07</b>	<b>824.87</b>	<b>0.01</b>	<b>0.03</b>	<b>833.71</b>
<b>Total</b>	<b>0.10</b>	<b>0.91</b>	<b>3.77</b>	<b>0.01</b>	<b>0.13</b>	<b>0.07</b>	<b>835.18</b>	<b>0.01</b>	<b>0.03</b>	<b>844.13</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Water Truck	4	Unpaved	4	120	2.273	0.227	36.37	3.64	2.18	0.22
Survey Truck	1	Unpaved	4	120	1.102	0.110	4.41	0.44	0.26	0.03

**Table 13**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Grading**

Soils Test Crew Truck	1	Unpaved	4	120	1.475	0.147	5.90	0.59	0.35	0.04
<b>Onsite Total</b>							<b>46.67</b>	<b>4.67</b>	<b>2.80</b>	<b>0.28</b>
<b>Offsite</b>										
Water Truck	4	Unpaved	1.5	120	2.273	0.227	13.64	1.36	0.82	0.08
Water Truck	4	Paved	16.5	120	0.003	0.001	0.22	0.05	0.01	0.00
Dump Truck	60	Unpaved	1.5	120	2.273	0.227	204.57	20.46	12.27	1.23
Dump Truck	60	Paved	58.5	120	0.003	0.001	11.69	2.87	0.70	0.17
Worker Commute	15	Paved	58	120	0.003	0.001	2.90	0.71	0.17	0.04
Worker Commute	15	Unpaved	1.5	120	1.102	0.110	24.79	2.48	0.00	0.00
<b>Offsite Total</b>							<b>257.80</b>	<b>27.93</b>	<b>13.98</b>	<b>1.53</b>
<b>Total</b>							<b>304.48</b>	<b>32.60</b>	<b>16.78</b>	<b>1.81</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	24325	2918950	6.65E-02	1.01E-02	1616.47	244.78	96.99	14.69
Bulldozing, Scraping and Grading	hr	48	5760	114.985	38.089	5519.27	1828.27	331.16	109.70
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>7135.74</b>	<b>2073.05</b>	<b>428.14</b>	<b>124.38</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Based on handling 2,918,950 CY over 120 days

**Table 14**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Perimeter Wall**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.89	10.96	11.92	0.05	0.41	0.38	5,364.6
Onsite Motor Vehicle Exhaust	0.00	0.08	0.09	0.00	0.00	0.00	27.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	16.61	1.66	
Earthwork Fugitive PM	--	--	--	--	1.79	0.27	
<b>Onsite Total</b>	<b>1.89</b>	<b>11.04</b>	<b>12.01</b>	<b>0.05</b>	<b>18.81</b>	<b>2.31</b>	<b>5391.8</b>
Offsite Motor Vehicle Exhaust	0.21	3.19	5.22	0.01	0.21	0.09	1,400.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	32.79	3.65	
<b>Offsite Total</b>	<b>0.21</b>	<b>3.19</b>	<b>5.22</b>	<b>0.01</b>	<b>33.00</b>	<b>3.74</b>	<b>1400.6</b>
<b>Total</b>	<b>2.10</b>	<b>14.23</b>	<b>17.24</b>	<b>0.07</b>	<b>51.81</b>	<b>6.05</b>	<b>6792.4</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.06	0.33	0.36	0.00	0.01	0.01	160.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.50	0.05	
Earthwork Fugitive PM	--	--	--	--	0.03	0.00	
<b>Onsite Total</b>	<b>0.06</b>	<b>0.33</b>	<b>0.36</b>	<b>0.00</b>	<b>0.54</b>	<b>0.07</b>	<b>161.8</b>
Offsite Motor Vehicle Exhaust	0.01	0.10	0.16	0.00	0.01	0.00	42.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.59	0.07	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.10</b>	<b>0.16</b>	<b>0.00</b>	<b>0.59</b>	<b>0.07</b>	<b>42.0</b>
<b>Total</b>	<b>0.06</b>	<b>0.43</b>	<b>0.52</b>	<b>0.00</b>	<b>1.13</b>	<b>0.14</b>	<b>203.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	2	60	8
Bobcat	75	1	60	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	1.65	8.81	9.99	0.05	0.30	0.27	4976.47	0.15	0.13	5,019.6
Bobcat	0.24	2.15	1.93	0.00	0.11	0.10	341.79	0.02	0.01	345.0
<b>Total</b>	<b>1.89</b>	<b>10.96</b>	<b>11.92</b>	<b>0.05</b>	<b>0.41</b>	<b>0.38</b>	<b>5318.25</b>	<b>0.17</b>	<b>0.14</b>	<b>5364.58</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

**Table 14**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Perimeter Wall**

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.05	0.26	0.30	0.00	0.01	0.01	149.29	0.00	0.00	150.6
Bobcat	0.01	0.06	0.06	0.00	0.00	0.00	10.25	0.00	0.00	10.4
<b>Total</b>	<b>0.06</b>	<b>0.33</b>	<b>0.36</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>159.55</b>	<b>0.01</b>	<b>0.00</b>	<b>160.94</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Concrete Truck	3	60	N/A	1
Flatbed Truck	2	60	N/A	1
Crew Truck	1	60	N/A	4
Foreman Truck	1	60	N/A	4
<b>Offsite</b>				
Concrete Truck	3	60	N/A	60
Flatbed Truck	2	60	N/A	60
Worker Commute	8	60	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flatbed Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Crew Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Foreman Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flatbed Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Concrete Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Flatbed Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Crew Truck	0.00	0.03	0.00	0.00	0.00	0.00	4.62	0.00	0.00	4.68



**Table 14**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Perimeter Wall**

Foreman Truck	0.00	0.03	0.00	0.00	0.00	0.00	4.62	0.00	0.00	4.68
<b>Onsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>26.94</b>	<b>0.00</b>	<b>0.00</b>	<b>27.26</b>
<b>Offsite</b>										
Concrete Truck	0.08	0.51	2.98	0.01	0.10	0.05	637.25	0.00	0.02	644.05
Flatbed Truck	0.05	0.34	1.99	0.00	0.07	0.04	424.83	0.00	0.01	429.37
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.21</b>	<b>3.19</b>	<b>5.22</b>	<b>0.01</b>	<b>0.21</b>	<b>0.09</b>	<b>1385.51</b>	<b>0.03</b>	<b>0.05</b>	<b>1400.55</b>
<b>Total</b>	<b>0.21</b>	<b>3.26</b>	<b>5.31</b>	<b>0.01</b>	<b>0.21</b>	<b>0.09</b>	<b>1412.45</b>	<b>0.03</b>	<b>0.05</b>	<b>1427.81</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.32
Flatbed Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.81</b>	<b>0.00</b>	<b>0.00</b>	<b>0.82</b>
<b>Offsite</b>										
Concrete Truck	0.00	0.02	0.09	0.00	0.00	0.00	19.12	0.00	0.00	19.32
Flatbed Truck	0.00	0.01	0.06	0.00	0.00	0.00	12.74	0.00	0.00	12.88
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.70	0.00	0.00	9.81
<b>Offsite Total</b>	<b>0.01</b>	<b>0.10</b>	<b>0.16</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>41.57</b>	<b>0.00</b>	<b>0.00</b>	<b>42.02</b>
<b>Total</b>	<b>0.01</b>	<b>0.10</b>	<b>0.16</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>42.37</b>	<b>0.00</b>	<b>0.00</b>	<b>42.83</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Concrete Truck	3	Unpaved	1	60	2.273	0.227	6.82	0.68	0.20	0.02
Flatbed Truck	2	Unpaved	1	60	2.273	0.227	4.55	0.45	0.14	0.01
Crew Truck	1	Unpaved	4	60	1.311	0.131	5.24	0.52	0.16	0.02
<b>Onsite Total</b>							<b>16.61</b>	<b>1.66</b>	<b>0.50</b>	<b>0.05</b>
<b>Offsite</b>										
Concrete Truck	3	Unpaved	1.5	60	2.273	0.227	10.23	1.02	0.31	0.03
Concrete Truck	3	Paved	58.5	60	0.003	0.001	0.58	0.14	0.02	0.00
Flatbed Truck	2	Unpaved	1.5	60	2.273	0.227	6.82	0.68	0.20	0.02
Flatbed Truck	2	Paved	58.5	60	0.003	0.001	0.39	0.10	0.01	0.00
Worker Commute	8	Paved	58	60	0.003	0.001	1.54	0.38	0.05	0.01
Worker Commute	8	Unpaved	1.5	60	1.102	0.110	13.22	1.32	0.00	0.00

**Table 14**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Perimeter Wall**

<b>Offsite Total</b>							<b>32.79</b>	<b>3.65</b>	<b>0.59</b>	<b>0.07</b>
<b>Total</b>							<b>49.39</b>	<b>5.31</b>	<b>1.09</b>	<b>0.12</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling <sup>d</sup>	CY	27	810	6.65E-02	1.01E-02	1.79	0.27	0.03	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.79</b>	<b>0.27</b>	<b>0.03</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Based on handling 810 CY over 30 days

**Table 15**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Water Well**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.03	5.51	6.25	0.03	0.19	0.17	3,137.2
Onsite Motor Vehicle Exhaust	0.00	0.07	0.03	0.00	0.00	0.00	19.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	21.57	2.16	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.04</b>	<b>5.57</b>	<b>6.28</b>	<b>0.03</b>	<b>21.76</b>	<b>2.33</b>	<b>3156.2</b>
Offsite Motor Vehicle Exhaust	0.09	2.38	0.55	0.00	0.06	0.01	391.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	18.23	2.06	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.38</b>	<b>0.55</b>	<b>0.00</b>	<b>18.29</b>	<b>2.06</b>	<b>391.5</b>
<b>Total</b>	<b>1.12</b>	<b>7.96</b>	<b>6.83</b>	<b>0.04</b>	<b>40.05</b>	<b>4.39</b>	<b>3547.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.11	0.12	0.00	0.00	0.00	62.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.43	0.04	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.11</b>	<b>0.13</b>	<b>0.00</b>	<b>0.44</b>	<b>0.05</b>	<b>63.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	7.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>7.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.16</b>	<b>0.14</b>	<b>0.00</b>	<b>0.54</b>	<b>0.06</b>	<b>71.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Drill Rig	350	1	40	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Drill Rig	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Drill Rig	1.03	5.51	6.25	0.03	0.19	0.17	3110.29	0.09	0.08	3,137.2
<b>Total</b>	<b>1.03</b>	<b>5.51</b>	<b>6.25</b>	<b>0.03</b>	<b>0.19</b>	<b>0.17</b>	<b>3110.29</b>	<b>0.09</b>	<b>0.08</b>	<b>3137.23</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

**Table 15  
Alternative Substation Construction Emissions - Initial Build Out  
Water Well**

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Drill Rig	0.02	0.11	0.12	0.00	0.00	0.00	62.21	0.00	0.00	62.7
<b>Total</b>	<b>0.02</b>	<b>0.11</b>	<b>0.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>62.21</b>	<b>0.00</b>	<b>0.00</b>	<b>62.74</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
Water Truck	1	40	N/A	1
Tool Truck	2	40	N/A	4
Crew Truck	2	40	N/A	4
<b>Offsite</b>				
Water Truck	1	40	N/A	18
Worker Commute	8	40	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Tool Truck	0.00	0.00	0.01	0.00	0.00	0.00	5.99	0.00	0.00	6.06
Crew Truck	0.00	0.06	0.01	0.00	0.00	0.00	9.24	0.00	0.00	9.37
<b>Onsite Total</b>	<b>0.00</b>	<b>0.07</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>18.77</b>	<b>0.00</b>	<b>0.00</b>	<b>19.01</b>
<b>Offsite</b>										

**Table 15  
Alternative Substation Construction Emissions - Initial Build Out  
Water Well**

Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.09</b>	<b>2.38</b>	<b>0.55</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>387.16</b>	<b>0.02</b>	<b>0.01</b>	<b>391.53</b>
<b>Total</b>	<b>0.09</b>	<b>2.45</b>	<b>0.59</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>405.93</b>	<b>0.02</b>	<b>0.01</b>	<b>410.54</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.12
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.19
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.38</b>	<b>0.00</b>	<b>0.00</b>	<b>0.38</b>
<b>Offsite</b>										
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.27	0.00	0.00	1.29
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.47	0.00	0.00	6.54
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.74</b>	<b>0.00</b>	<b>0.00</b>	<b>7.83</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.12</b>	<b>0.00</b>	<b>0.00</b>	<b>8.21</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Water Truck	1	Unpaved	1	40	2.273	0.227	2.27	0.23	0.05	0.00
Tool Truck	2	Unpaved	4	40	1.102	0.110	8.81	0.88	0.18	0.02
Crew Truck	2	Unpaved	4	40	1.311	0.131	10.48	1.05	0.21	0.02
<b>Onsite Total</b>							<b>21.57</b>	<b>2.16</b>	<b>0.43</b>	<b>0.04</b>
<b>Offsite</b>										
Water Truck	1	Unpaved	1.5	40	2.273	0.227	3.41	0.34	0.07	0.01
Water Truck	1	Paved	16.5	40	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	8	Paved	58	40	0.003	0.001	1.54	0.38	0.03	0.01
Worker Commute	8	Unpaved	1.5	40	1.102	0.110	13.22	1.32	0.00	0.00
<b>Offsite Total</b>							<b>18.23</b>	<b>2.06</b>	<b>0.10</b>	<b>0.01</b>
<b>Total</b>							<b>39.80</b>	<b>4.21</b>	<b>0.53</b>	<b>0.06</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 15**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Water Well**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 16**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Civil**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.53	7.36	10.49	0.03	0.53	0.49	2,489.6
Onsite Motor Vehicle Exhaust	0.17	1.17	6.73	0.01	0.22	0.12	1,455.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	925.06	92.51	
Earthwork Fugitive PM	--	--	--	--	15.28	2.31	
<b>Onsite Total</b>	<b>1.71</b>	<b>8.53</b>	<b>17.22</b>	<b>0.04</b>	<b>941.09</b>	<b>95.43</b>	<b>3944.6</b>
Offsite Motor Vehicle Exhaust	10.32	71.24	401.03	0.85	13.19	7.29	86,909.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1470.78	158.73	
<b>Offsite Total</b>	<b>10.32</b>	<b>71.24</b>	<b>401.03</b>	<b>0.85</b>	<b>1483.97</b>	<b>166.02</b>	<b>86909.5</b>
<b>Total</b>	<b>12.03</b>	<b>79.77</b>	<b>418.25</b>	<b>0.89</b>	<b>2425.06</b>	<b>261.45</b>	<b>90854.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.07	0.10	0.00	0.01	0.00	24.9
Onsite Motor Vehicle Exhaust	0.00	0.01	0.07	0.00	0.00	0.00	14.5
Onsite Motor Vehicle Fugitive PM	--	--	--	--	9.24	0.92	
Earthwork Fugitive PM	--	--	--	--	0.15	0.02	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.09</b>	<b>0.17</b>	<b>0.00</b>	<b>9.40</b>	<b>0.95</b>	<b>39.4</b>
Offsite Motor Vehicle Exhaust	0.10	0.71	4.01	0.01	0.13	0.07	869.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	14.58	1.57	
<b>Offsite Total</b>	<b>0.10</b>	<b>0.71</b>	<b>4.01</b>	<b>0.01</b>	<b>14.71</b>	<b>1.65</b>	<b>869.1</b>
<b>Total</b>	<b>0.12</b>	<b>0.80</b>	<b>4.18</b>	<b>0.01</b>	<b>24.11</b>	<b>2.60</b>	<b>908.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	1	20	4
Skip Loader	350	1	20	3
Forklift	100	1	20	4
Trencher	75	1	20	4
Bobcat	75	1	20	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Skip Loader	350	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
Trencher	75	0.108	0.456	0.665	0.001	0.055	0.051	64.837	0.010	0.002	Trenchers
Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders

<sup>a</sup> From Table 110

**Construction Equipment Daily Exhaust Emissions**

**Table 16**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Civil**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	0.41	2.20	2.50	0.01	0.07	0.07	1244.12	0.04	0.03	1,254.9
Skip Loader	0.48	1.68	3.77	0.01	0.13	0.12	710.39	0.04	0.02	717.0
Forklift	0.12	0.85	0.84	0.00	0.06	0.05	124.79	0.01	0.00	126.0
Trencher	0.43	1.82	2.66	0.00	0.22	0.20	259.35	0.04	0.01	262.3
Bobcat	0.09	0.81	0.72	0.00	0.04	0.04	128.17	0.01	0.00	129.4
<b>Total</b>	<b>1.53</b>	<b>7.36</b>	<b>10.49</b>	<b>0.03</b>	<b>0.53</b>	<b>0.49</b>	<b>2466.81</b>	<b>0.14</b>	<b>0.06</b>	<b>2489.60</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.00	0.02	0.02	0.00	0.00	0.00	12.44	0.00	0.00	12.5
Skip Loader	0.00	0.02	0.04	0.00	0.00	0.00	7.10	0.00	0.00	7.2
Forklift	0.00	0.01	0.01	0.00	0.00	0.00	1.25	0.00	0.00	1.3
Trencher	0.00	0.02	0.03	0.00	0.00	0.00	2.59	0.00	0.00	2.6
Bobcat	0.00	0.01	0.01	0.00	0.00	0.00	1.28	0.00	0.00	1.3
<b>Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.10</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>24.67</b>	<b>0.00</b>	<b>0.00</b>	<b>24.90</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Dump Truck	1	20	N/A	1
Concrete Truck	127	20	N/A	1
Water Truck	2	20	N/A	1
Tool Truck	1	20	N/A	1
Gravel Delivery Truck	276	20	N/A	1
Inspection Services	1	5	N/A	1
<b>Offsite</b>				
Water Truck	1	20	N/A	18
Gravel Delivery Truck	276	20	N/A	60
Concrete Truck	127	20	N/A	60
Worker Commute	8	20	N/A	58

<sup>a</sup> Concrete trucks based on 25,300 CY over 20 days and 10 CY/truck

Gravel delivery truck based on 40,250 CY over 20 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										



**Table 16**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Civil**

Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Gravel Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Gravel Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Concrete Truck	0.05	0.36	2.10	0.00	0.07	0.04	449.61	0.00	0.02	454.42
Water Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Tool Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Gravel Delivery Truck	0.12	0.79	4.57	0.01	0.15	0.08	977.11	0.01	0.03	987.55
Inspection Services	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.17</b>	<b>1.17</b>	<b>6.73</b>	<b>0.01</b>	<b>0.22</b>	<b>0.12</b>	<b>1439.65</b>	<b>0.01</b>	<b>0.05</b>	<b>1455.04</b>
<b>Offsite</b>										
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Gravel Delivery Truck	7.01	47.16	274.27	0.58	8.99	4.99	58626.60	0.33	2.00	59253.00
Concrete Truck	3.22	21.70	126.21	0.27	4.14	2.30	26976.73	0.15	0.92	27264.97
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>10.32</b>	<b>71.24</b>	<b>401.03</b>	<b>0.85</b>	<b>13.19</b>	<b>7.29</b>	<b>85990.49</b>	<b>0.50</b>	<b>2.93</b>	<b>86909.50</b>
<b>Total</b>	<b>10.49</b>	<b>72.41</b>	<b>407.76</b>	<b>0.87</b>	<b>13.41</b>	<b>7.41</b>	<b>87430.14</b>	<b>0.50</b>	<b>2.98</b>	<b>88364.55</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Concrete Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.50	0.00	0.00	4.54
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Gravel Delivery Truck	0.00	0.01	0.05	0.00	0.00	0.00	9.77	0.00	0.00	9.88
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.39</b>	<b>0.00</b>	<b>0.00</b>	<b>14.54</b>
<b>Offsite</b>										

**Table 16**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Civil**

Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Gravel Delivery Truck	0.07	0.47	2.74	0.01	0.09	0.05	586.27	0.00	0.02	592.53
Concrete Truck	0.03	0.22	1.26	0.00	0.04	0.02	269.77	0.00	0.01	272.65
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.10</b>	<b>0.71</b>	<b>4.01</b>	<b>0.01</b>	<b>0.13</b>	<b>0.07</b>	<b>859.90</b>	<b>0.00</b>	<b>0.03</b>	<b>869.10</b>
<b>Total</b>	<b>0.10</b>	<b>0.72</b>	<b>4.08</b>	<b>0.01</b>	<b>0.13</b>	<b>0.07</b>	<b>874.29</b>	<b>0.01</b>	<b>0.03</b>	<b>883.64</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Dump Truck	1	Unpaved	1	20	2.273	0.227	2.27	0.23	0.02	0.00
Concrete Truck	127	Unpaved	1	20	2.273	0.227	288.68	28.87	2.89	0.29
Water Truck	2	Unpaved	1	20	2.273	0.227	4.55	0.45	0.05	0.00
Tool Truck	1	Unpaved	1	20	1.102	0.110	1.10	0.11	0.01	0.00
Gravel Delivery Truck	276	Unpaved	1	20	2.273	0.227	627.36	62.74	6.27	0.63
Inspection Services	1	Unpaved	1	5	1.102	0.110	1.10	0.11	0.00	0.00
<b>Onsite Total</b>							<b>925.06</b>	<b>92.51</b>	<b>9.24</b>	<b>0.92</b>
<b>Offsite</b>										
Water Truck	1	Unpaved	1.5	20	2.273	0.227	3.41	0.34	0.03	0.00
Water Truck	1	Paved	16.5	20	0.003	0.001	0.05	0.01	0.00	0.00
Gravel Delivery Truck	276	Unpaved	1.5	20	2.273	0.227	941.04	94.10	9.41	0.94
Gravel Delivery Truck	276	Paved	58.5	20	0.003	0.001	53.76	13.20	0.54	0.13
Concrete Truck	127	Unpaved	1.5	20	2.273	0.227	433.01	43.30	4.33	0.43
Concrete Truck	127	Paved	58.5	20	0.003	0.001	24.74	6.07	0.25	0.06
Worker Commute	8	Paved	58	20	0.003	0.001	1.54	0.38	0.02	0.00
Worker Commute	8	Unpaved	1.5	20	1.102	0.110	13.22	1.32	0.00	0.00
<b>Offsite Total</b>							<b>1470.78</b>	<b>158.73</b>	<b>14.58</b>	<b>1.57</b>
<b>Total</b>							<b>2395.84</b>	<b>251.23</b>	<b>23.82</b>	<b>2.50</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	230	4600	6.65E-02	1.01E-02	15.28	2.31	0.15	0.02
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00

**Table 16**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Civil**

<b>Total</b>						<b>15.28</b>	<b>2.31</b>	<b>0.15</b>	<b>0.02</b>
--------------	--	--	--	--	--	--------------	-------------	-------------	-------------

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on handling 4,600 CY over 20 days

**Table 17**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Electrical**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.65	6.81	13.06	0.02	0.62	0.57	1,960.9
Onsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	4.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	7.30	0.73	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.65</b>	<b>6.82</b>	<b>13.07</b>	<b>0.02</b>	<b>7.92</b>	<b>1.30</b>	<b>1965.1</b>
Offsite Motor Vehicle Exhaust	0.08	2.33	0.25	0.00	0.05	0.00	327.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	14.77	1.70	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>14.81</b>	<b>1.70</b>	<b>327.1</b>
<b>Total</b>	<b>1.73</b>	<b>9.15</b>	<b>13.32</b>	<b>0.03</b>	<b>22.74</b>	<b>3.00</b>	<b>2292.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.03	0.06	0.00	0.00	0.00	7.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.06</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>7.8</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	2.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>2.5</b>
<b>Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.06</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>10.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Reach Manlift	75	1	15	4
Manlift	75	2	15	4
14 Ton Crane	250	1	2	3
150 Ton Crane	300	1	2	4
5 Ton Crane	250	1	15	3
Forklift	100	1	15	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Reach Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
14 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
150 Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
5 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts

<sup>a</sup> From Table 110

**Table 17**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Electrical**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Reach Manlift	0.17	0.94	1.21	0.00	0.09	0.08	152.15	0.01	0.00	153.7
Manlift	0.33	1.88	2.42	0.00	0.18	0.16	304.30	0.03	0.01	307.4
14 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
150 Ton Crane	0.53	1.77	4.28	0.01	0.15	0.14	719.76	0.05	0.02	726.6
5 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
Forklift	0.09	0.64	0.63	0.00	0.04	0.04	93.59	0.01	0.00	94.5
<b>Total</b>	<b>1.65</b>	<b>6.81</b>	<b>13.06</b>	<b>0.02</b>	<b>0.62</b>	<b>0.57</b>	<b>1942.15</b>	<b>0.15</b>	<b>0.05</b>	<b>1960.95</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Reach Manlift	0.00	0.01	0.01	0.00	0.00	0.00	1.14	0.00	0.00	1.2
Manlift	0.00	0.01	0.02	0.00	0.00	0.00	2.28	0.00	0.00	2.3
14 Ton Crane	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.3
150 Ton Crane	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.7
5 Ton Crane	0.00	0.01	0.02	0.00	0.00	0.00	2.52	0.00	0.00	2.5
Forklift	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.7
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.70</b>	<b>0.00</b>	<b>0.00</b>	<b>7.78</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Pick-up Truck	2	15	N/A	1
Crew Truck	2	15	N/A	1
Inspection Services	1	5	N/A	1
<b>Offsite</b>				
Worker Commute	8	15	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Pick-up Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										

**Table 17**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Electrical**

Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05
----------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
Inspection Services	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.15</b>	<b>0.00</b>	<b>0.00</b>	<b>4.20</b>
<b>Offsite</b>										
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>323.43</b>	<b>0.02</b>	<b>0.01</b>	<b>327.13</b>
<b>Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.26</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>327.58</b>	<b>0.02</b>	<b>0.01</b>	<b>331.33</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>
<b>Offsite</b>										
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.43	0.00	0.00	2.45
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.43</b>	<b>0.00</b>	<b>0.00</b>	<b>2.45</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.45</b>	<b>0.00</b>	<b>0.00</b>	<b>2.48</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Pick-up Truck	2	Unpaved	1	15	1.790	0.179	3.58	0.36	0.03	0.00
Crew Truck	2	Unpaved	1	15	1.311	0.131	2.62	0.26	0.02	0.00
Inspection Services	1	Unpaved	1	5	1.102	0.110	1.10	0.11	0.00	0.00
<b>Onsite Total</b>							<b>7.30</b>	<b>0.73</b>	<b>0.05</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	8	Paved	58	15	0.003	0.001	1.54	0.38	0.01	0.00
Worker Commute	8	Unpaved	1.5	15	1.102	0.110	13.22	1.32	0.00	0.00

**Table 17**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Electrical**

<b>Offsite Total</b>							<b>14.77</b>	<b>1.70</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>22.07</b>	<b>2.43</b>	<b>0.06</b>	<b>0.01</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 18**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Wiring**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	2.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	4.06	0.41	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>4.06</b>	<b>0.41</b>	<b>2.3</b>
Offsite Motor Vehicle Exhaust	0.06	1.75	0.19	0.00	0.04	0.00	245.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	11.07	1.28	
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>11.11</b>	<b>1.28</b>	<b>245.3</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>15.17</b>	<b>1.68</b>	<b>247.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.12	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	7.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>7.4</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.16</b>	<b>0.02</b>	<b>7.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**



**Table 18**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Wiring**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Wiring Truck	1	60	N/A	1
Pick-up Truck	1	60	N/A	1
<b>Offsite</b>				
Worker Commute	6	60	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Wiring Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Pick-up Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Pick-up Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.31</b>	<b>0.00</b>	<b>0.00</b>	<b>2.34</b>
<b>Offsite</b>										
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>242.58</b>	<b>0.01</b>	<b>0.01</b>	<b>245.34</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>244.88</b>	<b>0.01</b>	<b>0.01</b>	<b>247.69</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.04

**Table 18**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Wiring**

Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.04
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>
<b>Offsite</b>										
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	7.28	0.00	0.00	7.36
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.28</b>	<b>0.00</b>	<b>0.00</b>	<b>7.36</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.35</b>	<b>0.00</b>	<b>0.00</b>	<b>7.43</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Wiring Truck	1	Unpaved	1	60	2.273	0.227	2.27	0.23	0.07	0.01
Pick-up Truck	1	Unpaved	1	60	1.790	0.179	1.79	0.18	0.05	0.01
<b>Onsite Total</b>							<b>4.06</b>	<b>0.41</b>	<b>0.12</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	6	Paved	58	60	0.003	0.001	1.16	0.28	0.03	0.01
Worker Commute	6	Unpaved	1.5	60	1.102	0.110	9.92	0.99	0.00	0.00
<b>Offsite Total</b>							<b>11.07</b>	<b>1.28</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>15.14</b>	<b>1.68</b>	<b>0.16</b>	<b>0.02</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 19**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**MEER**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.79	2.66	6.43	0.01	0.23	0.21	1,089.8
Onsite Motor Vehicle Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	5.5
Onsite Motor Vehicle Fugitive PM	--	--	--	--	6.82	0.68	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.79</b>	<b>2.67</b>	<b>6.45</b>	<b>0.01</b>	<b>7.05</b>	<b>0.90</b>	<b>1095.3</b>
Offsite Motor Vehicle Exhaust	0.08	2.33	0.25	0.00	0.05	0.00	327.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	14.77	1.70	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>14.81</b>	<b>1.70</b>	<b>327.1</b>
<b>Total</b>	<b>0.88</b>	<b>5.00</b>	<b>6.70</b>	<b>0.01</b>	<b>21.87</b>	<b>2.60</b>	<b>1422.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	5.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.27	0.03	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.27</b>	<b>0.03</b>	<b>5.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.09	0.01	0.00	0.00	0.00	13.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.06	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.06</b>	<b>0.02</b>	<b>13.1</b>
<b>Total</b>	<b>0.01</b>	<b>0.11</b>	<b>0.04</b>	<b>0.00</b>	<b>0.34</b>	<b>0.04</b>	<b>18.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30 Ton Crane	350	1	10	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30 Ton Crane	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30 Ton Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
<b>Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.43</b>	<b>0.01</b>	<b>0.23</b>	<b>0.21</b>	<b>1079.64</b>	<b>0.07</b>	<b>0.03</b>	<b>1089.84</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 19**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**MEER**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30 Ton Crane	0.00	0.01	0.03	0.00	0.00	0.00	5.40	0.00	0.00	5.4
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.40</b>	<b>0.00</b>	<b>0.00</b>	<b>5.45</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	80	N/A	1
Stake Truck	1	80	N/A	1
Wiring Truck	1	80	N/A	1
<b>Offsite</b>				
Worker Commute	8	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Wiring Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Stake Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.44</b>	<b>0.00</b>	<b>0.00</b>	<b>5.51</b>
<b>Offsite</b>										
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>323.43</b>	<b>0.02</b>	<b>0.01</b>	<b>327.13</b>
<b>Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.27</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>328.88</b>	<b>0.02</b>	<b>0.01</b>	<b>332.63</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 19**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**MEER**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>
<b>Offsite</b>										
Worker Commute	0.00	0.09	0.01	0.00	0.00	0.00	12.94	0.00	0.00	13.09
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.94</b>	<b>0.00</b>	<b>0.00</b>	<b>13.09</b>
<b>Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>13.16</b>	<b>0.00</b>	<b>0.00</b>	<b>13.31</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
Stake Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
Wiring Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
<b>Onsite Total</b>							<b>6.82</b>	<b>0.68</b>	<b>0.27</b>	<b>0.03</b>
<b>Offsite</b>										
Worker Commute	8	Paved	58	80	0.003	0.001	1.54	0.38	0.06	0.02
Worker Commute	8	Unpaved	1.5	80	1.102	0.110	13.22	1.32	0.00	0.00
<b>Offsite Total</b>							<b>14.77</b>	<b>1.70</b>	<b>0.06</b>	<b>0.02</b>
<b>Total</b>							<b>21.58</b>	<b>2.38</b>	<b>0.33</b>	<b>0.04</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 20**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Maintenance**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	2.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	3.93	0.39	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.93</b>	<b>0.39</b>	<b>2.3</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.38	0.85	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>7.41</b>	<b>0.85</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>11.34</b>	<b>1.24</b>	<b>165.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.08	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>3.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 20**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Maintenance**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Foreman Truck	1	40	N/A	1
Crew Truck	2	40	N/A	1
<b>Offsite</b>				
Worker Commute	4	40	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Foreman Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.25</b>	<b>0.00</b>	<b>0.00</b>	<b>2.27</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02

**Table 20**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Maintenance**

Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>
<b>Offsite</b>										
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>	<b>0.00</b>	<b>0.00</b>	<b>3.27</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.28</b>	<b>0.00</b>	<b>0.00</b>	<b>3.32</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Foreman Truck	1	Unpaved	1	40	1.311	0.131	1.31	0.13	0.03	0.00
Crew Truck	2	Unpaved	1	40	1.311	0.131	2.62	0.26	0.05	0.01
<b>Onsite Total</b>							<b>3.93</b>	<b>0.39</b>	<b>0.08</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	40	0.003	0.001	0.77	0.19	0.02	0.00
Worker Commute	4	Unpaved	1.5	40	1.102	0.110	6.61	0.66	0.00	0.00
<b>Offsite Total</b>							<b>7.38</b>	<b>0.85</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>11.31</b>	<b>1.24</b>	<b>0.09</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 21**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Testing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	1.31	0.13	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.31</b>	<b>0.13</b>	<b>0.8</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.38	0.85	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>7.41</b>	<b>0.85</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>8.72</b>	<b>0.98</b>	<b>164.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.04	0.00	0.00	0.00	0.00	5.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>5.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 21**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Testing**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Crew Truck	1	70	N/A	1
<b>Offsite</b>				
Worker Commute	4	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.75</b>	<b>0.00</b>	<b>0.00</b>	<b>0.76</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.47</b>	<b>0.01</b>	<b>0.01</b>	<b>164.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>
<b>Offsite</b>										
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72

**Table 21**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Testing**

<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.66</b>	<b>0.00</b>	<b>0.00</b>	<b>5.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.69</b>	<b>0.00</b>	<b>0.00</b>	<b>5.75</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Crew Truck	1	Unpaved	1	70	1.311	0.131	1.31	0.13	0.05	0.00
<b>Onsite Total</b>							<b>1.31</b>	<b>0.13</b>	<b>0.05</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	70	0.003	0.001	0.77	0.19	0.03	0.01
Worker Commute	4	Unpaved	1.5	70	1.102	0.110	6.61	0.66	0.00	0.00
<b>Offsite Total</b>							<b>7.38</b>	<b>0.85</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>8.69</b>	<b>0.98</b>	<b>0.07</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 22  
Alternative Substation Construction Emissions - Initial Build Out  
Asphalting**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	4.56	17.14	40.49	0.07	1.52	1.40	5,844.0
Onsite Motor Vehicle Exhaust	0.04	0.26	1.49	0.00	0.05	0.03	323.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	204.92	20.49	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
Asphaltic Paving VOC	0.7	--	--	--	--	--	--
<b>Onsite Total</b>	<b>5.35</b>	<b>17.41</b>	<b>41.98</b>	<b>0.07</b>	<b>206.49</b>	<b>21.92</b>	<b>6167.16</b>
Offsite Motor Vehicle Exhaust	2.27	16.61	86.65	0.19	2.87	1.57	18,922.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	324.65	35.10	
<b>Offsite Total</b>	<b>2.27</b>	<b>16.61</b>	<b>86.65</b>	<b>0.19</b>	<b>327.52</b>	<b>36.67</b>	<b>18922.9</b>
<b>Total</b>	<b>7.62</b>	<b>34.02</b>	<b>128.63</b>	<b>0.25</b>	<b>534.02</b>	<b>58.59</b>	<b>25090.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.07	0.26	0.61	0.00	0.02	0.02	87.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.01	0.00	0.00	0.00	3.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	3.07	0.31	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.07</b>	<b>0.26</b>	<b>0.62</b>	<b>0.00</b>	<b>3.10</b>	<b>0.33</b>	<b>90.6</b>
Offsite Motor Vehicle Exhaust	0.03	0.25	1.30	0.00	0.04	0.02	283.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	4.72	0.51	
<b>Offsite Total</b>	<b>0.03</b>	<b>0.25</b>	<b>1.30</b>	<b>0.00</b>	<b>4.76</b>	<b>0.54</b>	<b>283.8</b>
<b>Total</b>	<b>0.10</b>	<b>0.51</b>	<b>1.92</b>	<b>0.00</b>	<b>7.86</b>	<b>0.86</b>	<b>374.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Paving Roller	200	2	30	8
Asphalt Paver	250	1	30	8
Tractor	150	1	30	8
Asphalt Curb Machine	250	1	30	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Paving Roller	200	0.104	0.346	0.995	0.002	0.033	0.031	152.952	0.009	0.004	Rollers
Asphalt Paver	250	0.176	0.537	1.546	0.002	0.059	0.054	194.197	0.016	0.005	Pavers
Tractor	150	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Asphalt Curb Machine	250	0.108	0.330	0.969	0.001	0.036	0.033	122.182	0.010	0.003	Paving Equipment

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 22**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Asphalting**

Paving Roller	1.67	5.54	15.91	0.03	0.53	0.49	2447.24	0.15	0.06	2,470.1
Asphalt Paver	1.41	4.29	12.37	0.02	0.47	0.43	1553.58	0.13	0.04	1,568.8
Tractor	0.63	4.68	4.45	0.01	0.23	0.22	810.37	0.06	0.02	818.1
Asphalt Curb Machine	0.86	2.64	7.75	0.01	0.29	0.26	977.45	0.08	0.03	987.0
<b>Total</b>	<b>4.56</b>	<b>17.14</b>	<b>40.49</b>	<b>0.07</b>	<b>1.52</b>	<b>1.40</b>	<b>5788.64</b>	<b>0.41</b>	<b>0.15</b>	<b>5843.96</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Paving Roller	0.02	0.08	0.24	0.00	0.01	0.01	36.71	0.00	0.00	37.1
Asphalt Paver	0.02	0.06	0.19	0.00	0.01	0.01	23.30	0.00	0.00	23.5
Tractor	0.01	0.07	0.07	0.00	0.00	0.00	12.16	0.00	0.00	12.3
Asphalt Curb Machine	0.01	0.04	0.12	0.00	0.00	0.00	14.66	0.00	0.00	14.8
<b>Total</b>	<b>0.07</b>	<b>0.26</b>	<b>0.61</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>86.83</b>	<b>0.01</b>	<b>0.00</b>	<b>87.66</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Stake Truck	1	30	N/A	1
Dump Truck	1	30	N/A	1
Crew Truck	2	30	N/A	1
Asphalt Delivery Truck	35	30	N/A	1
Aggregate Base Delivery Truck	52	30	N/A	1
<b>Offsite</b>				
Asphalt Delivery Truck	35	30	N/A	60
Aggregate Base Delivery Truck	52	30	N/A	60
Worker Commute	6	30	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 7,500 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 11,400 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Crew Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Asphalt Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Aggregate Base Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
<b>Offsite</b>										
Asphalt Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 22**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Asphalting**

Aggregate Base Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Stake Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Crew Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Asphalt Delivery Truck	0.01	0.10	0.58	0.00	0.02	0.01	123.91	0.00	0.00	125.23
Aggregate Base Delivery Truck	0.02	0.15	0.86	0.00	0.03	0.02	184.09	0.00	0.01	186.06
<b>Onsite Total</b>	<b>0.04</b>	<b>0.26</b>	<b>1.49</b>	<b>0.00</b>	<b>0.05</b>	<b>0.03</b>	<b>319.78</b>	<b>0.00</b>	<b>0.01</b>	<b>323.20</b>
<b>Offsite</b>										
Asphalt Delivery Truck	0.89	5.98	34.78	0.07	1.14	0.63	7434.53	0.04	0.25	7513.97
Aggregate Base Delivery Truck	1.32	8.88	51.67	0.11	1.69	0.94	11045.59	0.06	0.38	11163.61
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>2.27</b>	<b>16.61</b>	<b>86.65</b>	<b>0.19</b>	<b>2.87</b>	<b>1.57</b>	<b>18722.70</b>	<b>0.12</b>	<b>0.64</b>	<b>18922.92</b>
<b>Total</b>	<b>2.31</b>	<b>16.88</b>	<b>88.14</b>	<b>0.19</b>	<b>2.92</b>	<b>1.60</b>	<b>19042.48</b>	<b>0.12</b>	<b>0.65</b>	<b>19246.12</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Aggregate Base Delivery Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.76	0.00	0.00	2.79
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.94</b>	<b>0.00</b>	<b>0.00</b>	<b>2.97</b>
<b>Offsite</b>										
Asphalt Delivery Truck	0.01	0.09	0.52	0.00	0.02	0.01	111.52	0.00	0.00	112.71
Aggregate Base Delivery Truck	0.02	0.13	0.78	0.00	0.03	0.01	165.68	0.00	0.01	167.45
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	3.64	0.00	0.00	3.68
<b>Offsite Total</b>	<b>0.03</b>	<b>0.25</b>	<b>1.30</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>280.84</b>	<b>0.00</b>	<b>0.01</b>	<b>283.84</b>
<b>Total</b>	<b>0.03</b>	<b>0.25</b>	<b>1.31</b>	<b>0.00</b>	<b>0.04</b>	<b>0.02</b>	<b>283.78</b>	<b>0.00</b>	<b>0.01</b>	<b>286.81</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										

**Table 22**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Asphalting**

Stake Truck	1	Unpaved	1	30	2.273	0.227	2.27	0.23	0.03	0.00
Dump Truck	1	Unpaved	1	30	2.273	0.227	2.27	0.23	0.03	0.00
Crew Truck	2	Unpaved	1	30	1.311	0.131	2.62	0.26	0.04	0.00
Asphalt Delivery Truck	35	Unpaved	1	30	2.273	0.227	79.56	7.96	1.19	0.12
Aggregate Base Delivery Truck	52	Unpaved	1	30	2.273	0.227	118.20	11.82	1.77	0.18
<b>Onsite Total</b>							<b>204.92</b>	<b>20.49</b>	<b>3.07</b>	<b>0.31</b>
<b>Offsite</b>										
Asphalt Delivery Truck	35	Unpaved	1.5	30	2.273	0.227	119.33	11.93	1.79	0.18
Asphalt Delivery Truck	35	Paved	58.5	30	0.003	0.001	6.82	1.67	0.10	0.03
Aggregate Base Delivery Truck	52	Unpaved	1.5	30	2.273	0.227	177.30	17.73	2.66	0.27
Aggregate Base Delivery Truck	52	Paved	58.5	30	0.003	0.001	10.13	2.49	0.15	0.04
Worker Commute	6	Paved	58	30	0.003	0.001	1.16	0.28	0.02	0.00
Worker Commute	6	Unpaved	1.5	30	1.102	0.110	9.92	0.99	0.00	0.00
<b>Offsite Total</b>							<b>324.65</b>	<b>35.10</b>	<b>4.72</b>	<b>0.51</b>
<b>Total</b>							<b>529.57</b>	<b>55.59</b>	<b>7.79</b>	<b>0.82</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Asphaltic Paving VOC Emissions**

Area Paved (acre/day) <sup>a</sup>	Emission Factor (lb/acre) <sup>b</sup>	VOC (lb/day) <sup>c</sup>
0.29	2.62	0.7

a Based on 372,400 sq. ft. of area paved in 30 days

b From CalEEMod User's Guide

c Emissions [lb/day] = Emission factor [lb/acre] x Area paved [acre/day]

**Table 23**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.06	0.01	0.00	0.00	0.00	9.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	8.81	0.88	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>8.81</b>	<b>0.88</b>	<b>9.4</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.69	0.43	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>3.70</b>	<b>0.43</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.65</b>	<b>0.07</b>	<b>0.00</b>	<b>12.52</b>	<b>1.31</b>	<b>91.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.01	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>0.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>



**Table 23**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Survey**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Survey Truck	2	15	N/A	4
<b>Offsite</b>				
Worker Commute	2	15	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Survey Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.06	0.01	0.00	0.00	0.00	9.24	0.00	0.00	9.37
<b>Onsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.24</b>	<b>0.00</b>	<b>0.00</b>	<b>9.37</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>
<b>Total</b>	<b>0.02</b>	<b>0.65</b>	<b>0.07</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>90.09</b>	<b>0.01</b>	<b>0.00</b>	<b>91.15</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 23**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Survey**

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>
<b>Offsite</b>										
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.68</b>	<b>0.00</b>	<b>0.00</b>	<b>0.68</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Survey Truck	2	Unpaved	4	15	1.102	0.110	8.81	0.88	0.07	0.01
<b>Onsite Total</b>							<b>8.81</b>	<b>0.88</b>	<b>0.07</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	15	0.003	0.001	0.39	0.09	0.00	0.00
Worker Commute	2	Unpaved	1.5	15	1.102	0.110	3.31	0.33	0.00	0.00
<b>Offsite Total</b>							<b>3.69</b>	<b>0.43</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>							<b>12.51</b>	<b>1.31</b>	<b>0.07</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 23**  
**Alternative Substation Construction Emissions - Initial Build Out**  
**Survey**

a From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 24**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Civil**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	5.65	27.99	38.98	0.10	1.86	1.71	9,753.7
Onsite Motor Vehicle Exhaust	0.01	0.07	0.24	0.00	0.01	0.00	54.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	36.23	3.62	
Earthwork Fugitive PM	--	--	--	--	9.70	1.47	
<b>Onsite Total</b>	<b>5.66</b>	<b>28.06</b>	<b>39.21</b>	<b>0.10</b>	<b>47.80</b>	<b>6.81</b>	<b>9808.4</b>
Offsite Motor Vehicle Exhaust	0.37	5.84	9.02	0.03	0.37	0.16	2,459.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	63.45	7.01	
<b>Offsite Total</b>	<b>0.37</b>	<b>5.84</b>	<b>9.02</b>	<b>0.03</b>	<b>63.82</b>	<b>7.17</b>	<b>2459.7</b>
<b>Total</b>	<b>6.03</b>	<b>33.90</b>	<b>48.23</b>	<b>0.12</b>	<b>111.62</b>	<b>13.97</b>	<b>12268.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.73	3.64	5.07	0.01	0.24	0.22	1,268.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	6.9
Onsite Motor Vehicle Fugitive PM	--	--	--	--	4.49	0.45	
Earthwork Fugitive PM	--	--	--	--	0.97	0.15	
<b>Onsite Total</b>	<b>0.74</b>	<b>3.65</b>	<b>5.10</b>	<b>0.01</b>	<b>5.70</b>	<b>0.82</b>	<b>1274.9</b>
Offsite Motor Vehicle Exhaust	0.05	0.76	1.17	0.00	0.05	0.02	319.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	5.03	0.59	
<b>Offsite Total</b>	<b>0.05</b>	<b>0.76</b>	<b>1.17</b>	<b>0.00</b>	<b>5.07</b>	<b>0.61</b>	<b>319.8</b>
<b>Total</b>	<b>0.78</b>	<b>4.41</b>	<b>6.27</b>	<b>0.02</b>	<b>10.77</b>	<b>1.43</b>	<b>1594.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	4	260	4
Excavator	85	2	260	3
Skip Loader	350	4	260	3
Forklift	100	3	260	4
Trencher	75	2	260	4
Bobcat	75	4	260	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Excavator	85	0.083	0.507	0.529	0.001	0.039	0.036	73.557	0.008	0.002	Excavators
Skip Loader	350	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
Trencher	75	0.108	0.456	0.665	0.001	0.055	0.051	64.837	0.010	0.002	Trenchers
Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders

a From Table 110

**Table 24**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Civil**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	1.65	8.81	9.99	0.05	0.30	0.27	4976.47	0.15	0.13	5,019.6
Excavator	0.50	3.04	3.17	0.01	0.24	0.22	441.34	0.05	0.01	445.9
Skip Loader	1.91	6.71	15.07	0.03	0.54	0.50	2841.55	0.17	0.07	2,868.0
Forklift	0.37	2.55	2.53	0.00	0.18	0.16	374.36	0.03	0.01	378.1
Trencher	0.86	3.65	5.32	0.01	0.44	0.41	518.70	0.08	0.01	524.6
Bobcat	0.35	3.23	2.89	0.01	0.17	0.15	512.68	0.03	0.01	517.5
<b>Total</b>	<b>5.65</b>	<b>27.99</b>	<b>38.98</b>	<b>0.10</b>	<b>1.86</b>	<b>1.71</b>	<b>9665.09</b>	<b>0.51</b>	<b>0.25</b>	<b>9753.66</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.21	1.15	1.30	0.01	0.04	0.04	646.94	0.02	0.02	652.5
Excavator	0.06	0.40	0.41	0.00	0.03	0.03	57.37	0.01	0.00	58.0
Skip Loader	0.25	0.87	1.96	0.00	0.07	0.06	369.40	0.02	0.01	372.8
Forklift	0.05	0.33	0.33	0.00	0.02	0.02	48.67	0.00	0.00	49.2
Trencher	0.11	0.47	0.69	0.00	0.06	0.05	67.43	0.01	0.00	68.2
Bobcat	0.05	0.42	0.38	0.00	0.02	0.02	66.65	0.00	0.00	67.3
<b>Total</b>	<b>0.73</b>	<b>3.64</b>	<b>5.07</b>	<b>0.01</b>	<b>0.24</b>	<b>0.22</b>	<b>1256.46</b>	<b>0.07</b>	<b>0.03</b>	<b>1267.98</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Dump Truck	4	260	N/A	1
Concrete Truck	8	260	N/A	1
Water Truck	2	260	N/A	1
Tool Truck	2	260	N/A	1
Inspection Services	2	60	N/A	1
<b>Offsite</b>				
Water Truck	2	260	N/A	18
Concrete Truck	8	260	N/A	60
Worker Commute	15	260	N/A	58

<sup>a</sup> Concrete trucks based on 20,000 CY over 260 days and 10 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
---------	----------	-----------------------------	----------------------------	-----------------------------	-----------------------------	------------------------------	-------------------------------	-----------------------------	-----------------------------	-----------------------------

**Table 24**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Civil**

<b>Onsite</b>										
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.01	0.07	0.00	0.00	0.00	14.16	0.00	0.00	14.31
Concrete Truck	0.00	0.02	0.13	0.00	0.00	0.00	28.32	0.00	0.00	28.62
Water Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Tool Truck	0.00	0.02	0.00	0.00	0.00	0.00	2.31	0.00	0.00	2.34
Inspection Services	0.00	0.02	0.00	0.00	0.00	0.00	2.31	0.00	0.00	2.34
<b>Onsite Total</b>	<b>0.01</b>	<b>0.07</b>	<b>0.24</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>54.18</b>	<b>0.00</b>	<b>0.00</b>	<b>54.78</b>
<b>Offsite</b>										
Water Truck	0.02	0.10	0.60	0.00	0.02	0.01	127.45	0.00	0.00	128.81
Concrete Truck	0.20	1.37	7.95	0.02	0.26	0.14	1699.32	0.01	0.06	1717.48
Worker Commute	0.15	4.37	0.48	0.01	0.09	0.00	606.44	0.04	0.02	613.36
<b>Offsite Total</b>	<b>0.37</b>	<b>5.84</b>	<b>9.02</b>	<b>0.03</b>	<b>0.37</b>	<b>0.16</b>	<b>2433.21</b>	<b>0.05</b>	<b>0.08</b>	<b>2459.65</b>
<b>Total</b>	<b>0.38</b>	<b>5.91</b>	<b>9.26</b>	<b>0.03</b>	<b>0.38</b>	<b>0.16</b>	<b>2487.39</b>	<b>0.05</b>	<b>0.08</b>	<b>2514.43</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.84	0.00	0.00	1.86
Concrete Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.68	0.00	0.00	3.72
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.00	0.93
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.30
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.81</b>	<b>0.00</b>	<b>0.00</b>	<b>6.89</b>
<b>Offsite</b>										
Water Truck	0.00	0.01	0.08	0.00	0.00	0.00	16.57	0.00	0.00	16.75
Concrete Truck	0.03	0.18	1.03	0.00	0.03	0.02	220.91	0.00	0.01	223.27
Worker Commute	0.02	0.57	0.06	0.00	0.01	0.00	78.84	0.00	0.00	79.74
<b>Offsite Total</b>	<b>0.05</b>	<b>0.76</b>	<b>1.17</b>	<b>0.00</b>	<b>0.05</b>	<b>0.02</b>	<b>316.32</b>	<b>0.01</b>	<b>0.01</b>	<b>319.75</b>

**Table 24**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Civil**

<b>Total</b>	<b>0.05</b>	<b>0.77</b>	<b>1.20</b>	<b>0.00</b>	<b>0.05</b>	<b>0.02</b>	<b>323.13</b>	<b>0.01</b>	<b>0.01</b>	<b>326.64</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	---------------	-------------	-------------	---------------

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Dump Truck	4	Unpaved	1	260	2.273	0.227	9.09	0.91	1.18	0.12
Concrete Truck	8	Unpaved	1	260	2.273	0.227	18.18	1.82	2.36	0.24
Water Truck	2	Unpaved	1	260	2.273	0.227	4.55	0.45	0.59	0.06
Tool Truck	2	Unpaved	1	260	1.102	0.110	2.20	0.22	0.29	0.03
Inspection Services	2	Unpaved	1	60	1.102	0.110	2.20	0.22	0.07	0.01
<b>Onsite Total</b>							<b>36.23</b>	<b>3.62</b>	<b>4.49</b>	<b>0.45</b>
<b>Offsite</b>										
Water Truck	2	Unpaved	1.5	260	2.273	0.227	6.82	0.68	0.89	0.09
Water Truck	2	Paved	16.5	260	0.003	0.001	0.11	0.03	0.01	0.00
Concrete Truck	8	Unpaved	1.5	260	2.273	0.227	27.28	2.73	3.55	0.35
Concrete Truck	8	Paved	58.5	260	0.003	0.001	1.56	0.38	0.20	0.05
Worker Commute	15	Paved	58	260	0.003	0.001	2.90	0.71	0.38	0.09
Worker Commute	15	Unpaved	1.5	260	1.102	0.110	24.79	2.48	0.00	0.00
<b>Offsite Total</b>							<b>63.45</b>	<b>7.01</b>	<b>5.03</b>	<b>0.59</b>
<b>Total</b>							<b>99.68</b>	<b>10.63</b>	<b>9.52</b>	<b>1.04</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	146	29150	6.65E-02	1.01E-02	9.70	1.47	0.97	0.15
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>9.70</b>	<b>1.47</b>	<b>0.97</b>	<b>0.15</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on handling 29,150 CY over 200 days

**Table 25**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Electrical**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.86	12.87	22.36	0.04	1.15	1.05	3,271.3
Onsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	5.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	8.40	0.84	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.86</b>	<b>12.89</b>	<b>22.36</b>	<b>0.04</b>	<b>9.55</b>	<b>1.89</b>	<b>3276.6</b>
Offsite Motor Vehicle Exhaust	0.16	4.66	0.51	0.01	0.10	0.00	654.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	29.53	3.40	
<b>Offsite Total</b>	<b>0.16</b>	<b>4.66</b>	<b>0.51</b>	<b>0.01</b>	<b>29.63</b>	<b>3.41</b>	<b>654.3</b>
<b>Total</b>	<b>3.03</b>	<b>17.55</b>	<b>22.87</b>	<b>0.04</b>	<b>39.18</b>	<b>5.30</b>	<b>3930.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.18	0.94	1.31	0.00	0.08	0.08	180.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.69	0.07	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.18</b>	<b>0.94</b>	<b>1.31</b>	<b>0.00</b>	<b>0.77</b>	<b>0.14</b>	<b>180.7</b>
Offsite Motor Vehicle Exhaust	0.02	0.47	0.05	0.00	0.01	0.00	65.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.31	0.08	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.05</b>	<b>0.00</b>	<b>0.32</b>	<b>0.08</b>	<b>65.4</b>
<b>Total</b>	<b>0.19</b>	<b>1.41</b>	<b>1.36</b>	<b>0.00</b>	<b>1.09</b>	<b>0.22</b>	<b>246.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Reach Manlift	75	2	200	4
Manlift	75	4	200	4
14 Ton Crane	250	2	20	4
150 Ton Crane	300	1	20	4
5 Ton Crane	250	1	200	3
Forklift	100	4	200	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Reach Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
14 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
150 Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
5 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts

<sup>a</sup> From Table 110



**Table 25**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Electrical**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Reach Manlift	0.33	1.88	2.42	0.00	0.18	0.16	304.30	0.03	0.01	307.4
Manlift	0.66	3.77	4.84	0.01	0.35	0.32	608.60	0.06	0.02	614.8
14 Ton Crane	0.70	2.11	6.02	0.01	0.21	0.19	896.47	0.06	0.02	905.0
150 Ton Crane	0.53	1.77	4.28	0.01	0.15	0.14	719.76	0.05	0.02	726.6
5 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
Forklift	0.37	2.55	2.53	0.00	0.18	0.16	374.36	0.03	0.01	378.1
<b>Total</b>	<b>2.86</b>	<b>12.87</b>	<b>22.36</b>	<b>0.04</b>	<b>1.15</b>	<b>1.05</b>	<b>3239.66</b>	<b>0.26</b>	<b>0.08</b>	<b>3271.27</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Reach Manlift	0.03	0.19	0.24	0.00	0.02	0.02	30.43	0.00	0.00	30.7
Manlift	0.07	0.38	0.48	0.00	0.04	0.03	60.86	0.01	0.00	61.5
14 Ton Crane	0.01	0.02	0.06	0.00	0.00	0.00	8.96	0.00	0.00	9.1
150 Ton Crane	0.01	0.02	0.04	0.00	0.00	0.00	7.20	0.00	0.00	7.3
5 Ton Crane	0.03	0.08	0.23	0.00	0.01	0.01	33.62	0.00	0.00	33.9
Forklift	0.04	0.26	0.25	0.00	0.02	0.02	37.44	0.00	0.00	37.8
<b>Total</b>	<b>0.18</b>	<b>0.94</b>	<b>1.31</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>178.51</b>	<b>0.02</b>	<b>0.00</b>	<b>180.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Pick-up Truck	2	200	N/A	1
Crew Truck	2	200	N/A	1
Inspection Services	2	60	N/A	1
<b>Offsite</b>				
Worker Commute	16	200	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Pick-up Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										

**Table 25**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Electrical**

Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05
----------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
Inspection Services	0.00	0.02	0.00	0.00	0.00	0.00	2.31	0.00	0.00	2.34
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.30</b>	<b>0.00</b>	<b>0.00</b>	<b>5.37</b>
<b>Offsite</b>										
Worker Commute	0.16	4.66	0.51	0.01	0.10	0.00	646.87	0.04	0.02	654.25
<b>Offsite Total</b>	<b>0.16</b>	<b>4.66</b>	<b>0.51</b>	<b>0.01</b>	<b>0.10</b>	<b>0.00</b>	<b>646.87</b>	<b>0.04</b>	<b>0.02</b>	<b>654.25</b>
<b>Total</b>	<b>0.16</b>	<b>4.68</b>	<b>0.51</b>	<b>0.01</b>	<b>0.10</b>	<b>0.00</b>	<b>652.17</b>	<b>0.04</b>	<b>0.02</b>	<b>659.63</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.15
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.15
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>
<b>Offsite</b>										
Worker Commute	0.02	0.47	0.05	0.00	0.01	0.00	64.69	0.00	0.00	65.43
<b>Offsite Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.05</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>64.69</b>	<b>0.00</b>	<b>0.00</b>	<b>65.43</b>
<b>Total</b>	<b>0.02</b>	<b>0.47</b>	<b>0.05</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>65.06</b>	<b>0.00</b>	<b>0.00</b>	<b>65.80</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Pick-up Truck	2	Unpaved	1	200	1.790	0.179	3.58	0.36	0.36	0.04
Crew Truck	2	Unpaved	1	200	1.311	0.131	2.62	0.26	0.26	0.03
Inspection Services	2	Unpaved	1	60	1.102	0.110	2.20	0.22	0.07	0.01
<b>Onsite Total</b>							<b>8.40</b>	<b>0.84</b>	<b>0.69</b>	<b>0.07</b>
<b>Offsite</b>										
Worker Commute	16	Paved	58	200	0.003	0.001	3.09	0.76	0.31	0.08
Worker Commute	16	Unpaved	1.5	200	1.102	0.110	26.44	2.64	0.00	0.00

**Table 25**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Electrical**

<b>Offsite Total</b>							<b>29.53</b>	<b>3.40</b>	<b>0.31</b>	<b>0.08</b>
<b>Total</b>							<b>37.94</b>	<b>4.24</b>	<b>1.00</b>	<b>0.14</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 26**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Wiring**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	2.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	4.06	0.41	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>4.06</b>	<b>0.41</b>	<b>2.3</b>
Offsite Motor Vehicle Exhaust	0.06	1.75	0.19	0.00	0.04	0.00	245.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	11.07	1.28	
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>11.11</b>	<b>1.28</b>	<b>245.3</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>15.17</b>	<b>1.68</b>	<b>247.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.16	0.02	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>	<b>0.02</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.07	0.01	0.00	0.00	0.00	9.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>9.8</b>
<b>Total</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>0.00</b>	<b>0.21</b>	<b>0.03</b>	<b>9.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 26**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Wiring**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Wiring Truck	1	80	N/A	1
Pick-up Truck	1	80	N/A	1
<b>Offsite</b>				
Worker Commute	6	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Wiring Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Pick-up Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Pick-up Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.31</b>	<b>0.00</b>	<b>0.00</b>	<b>2.34</b>
<b>Offsite</b>										
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>242.58</b>	<b>0.01</b>	<b>0.01</b>	<b>245.34</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>244.88</b>	<b>0.01</b>	<b>0.01</b>	<b>247.69</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05

**Table 26**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Wiring**

Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.09</b>
<b>Offsite</b>										
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.70	0.00	0.00	9.81
<b>Offsite Total</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.70</b>	<b>0.00</b>	<b>0.00</b>	<b>9.81</b>
<b>Total</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.80</b>	<b>0.00</b>	<b>0.00</b>	<b>9.91</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Wiring Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
Pick-up Truck	1	Unpaved	1	80	1.790	0.179	1.79	0.18	0.07	0.01
<b>Onsite Total</b>							<b>4.06</b>	<b>0.41</b>	<b>0.16</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	6	Paved	58	80	0.003	0.001	1.16	0.28	0.05	0.01
Worker Commute	6	Unpaved	1.5	80	1.102	0.110	9.92	0.99	0.00	0.00
<b>Offsite Total</b>							<b>11.07</b>	<b>1.28</b>	<b>0.05</b>	<b>0.01</b>
<b>Total</b>							<b>15.14</b>	<b>1.68</b>	<b>0.21</b>	<b>0.03</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 27**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Control Room**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.79	2.66	6.43	0.01	0.23	0.21	1,089.8
Onsite Motor Vehicle Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	5.5
Onsite Motor Vehicle Fugitive PM	--	--	--	--	6.82	0.68	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.79</b>	<b>2.67</b>	<b>6.45</b>	<b>0.01</b>	<b>7.05</b>	<b>0.90</b>	<b>1095.3</b>
Offsite Motor Vehicle Exhaust	0.10	2.91	0.32	0.00	0.06	0.00	408.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	18.46	2.13	
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>18.52</b>	<b>2.13</b>	<b>408.9</b>
<b>Total</b>	<b>0.90</b>	<b>5.58</b>	<b>6.76</b>	<b>0.02</b>	<b>25.57</b>	<b>3.02</b>	<b>1504.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.05	0.00	0.00	0.00	8.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.27	0.03	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.00</b>	<b>0.27</b>	<b>0.03</b>	<b>8.4</b>
Offsite Motor Vehicle Exhaust	0.00	0.12	0.01	0.00	0.00	0.00	16.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.08	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>16.4</b>
<b>Total</b>	<b>0.01</b>	<b>0.14</b>	<b>0.06</b>	<b>0.00</b>	<b>0.35</b>	<b>0.05</b>	<b>24.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30 Ton Crane	350	1	15	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30 Ton Crane	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30 Ton Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
<b>Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.43</b>	<b>0.01</b>	<b>0.23</b>	<b>0.21</b>	<b>1079.64</b>	<b>0.07</b>	<b>0.03</b>	<b>1089.84</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 27**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Control Room**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30 Ton Crane	0.01	0.02	0.05	0.00	0.00	0.00	8.10	0.00	0.00	8.2
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.10</b>	<b>0.00</b>	<b>0.00</b>	<b>8.17</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	80	N/A	1
Stake Truck	1	80	N/A	1
Wiring Truck	1	80	N/A	1
<b>Offsite</b>				
Worker Commute	10	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Wiring Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Stake Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.44</b>	<b>0.00</b>	<b>0.00</b>	<b>5.51</b>
<b>Offsite</b>										
Worker Commute	0.10	2.91	0.32	0.00	0.06	0.00	404.29	0.02	0.01	408.91
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>404.29</b>	<b>0.02</b>	<b>0.01</b>	<b>408.91</b>
<b>Total</b>	<b>0.10</b>	<b>2.92</b>	<b>0.34</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>409.74</b>	<b>0.02</b>	<b>0.01</b>	<b>414.41</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**



**Table 27**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Control Room**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>
<b>Offsite</b>										
Worker Commute	0.00	0.12	0.01	0.00	0.00	0.00	16.17	0.00	0.00	16.36
<b>Offsite Total</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>16.17</b>	<b>0.00</b>	<b>0.00</b>	<b>16.36</b>
<b>Total</b>	<b>0.00</b>	<b>0.12</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>16.39</b>	<b>0.00</b>	<b>0.00</b>	<b>16.58</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
Stake Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
Wiring Truck	1	Unpaved	1	80	2.273	0.227	2.27	0.23	0.09	0.01
<b>Onsite Total</b>							<b>6.82</b>	<b>0.68</b>	<b>0.27</b>	<b>0.03</b>
<b>Offsite</b>										
Worker Commute	10	Paved	58	80	0.003	0.001	1.93	0.47	0.08	0.02
Worker Commute	10	Unpaved	1.5	80	1.102	0.110	16.53	1.65	0.00	0.00
<b>Offsite Total</b>							<b>18.46</b>	<b>2.13</b>	<b>0.08</b>	<b>0.02</b>
<b>Total</b>							<b>25.28</b>	<b>2.81</b>	<b>0.35</b>	<b>0.05</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 28**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Maintenance**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	2.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	3.93	0.39	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.93</b>	<b>0.39</b>	<b>2.3</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.38	0.85	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>7.41</b>	<b>0.85</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>11.34</b>	<b>1.24</b>	<b>165.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.20	0.02	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.20</b>	<b>0.02</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.06	0.01	0.00	0.00	0.00	8.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.04	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>8.2</b>
<b>Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.24</b>	<b>0.03</b>	<b>8.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 28**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Maintenance**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Foreman Truck	1	100	N/A	1
Crew Truck	2	100	N/A	1
<b>Offsite</b>				
Worker Commute	4	100	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Foreman Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.25</b>	<b>0.00</b>	<b>0.00</b>	<b>2.27</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04

**Table 28**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Maintenance**

Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.08
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>
<b>Offsite</b>										
Worker Commute	0.00	0.06	0.01	0.00	0.00	0.00	8.09	0.00	0.00	8.18
<b>Offsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.09</b>	<b>0.00</b>	<b>0.00</b>	<b>8.18</b>
<b>Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.20</b>	<b>0.00</b>	<b>0.00</b>	<b>8.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Foreman Truck	1	Unpaved	1	100	1.311	0.131	1.31	0.13	0.07	0.01
Crew Truck	2	Unpaved	1	100	1.311	0.131	2.62	0.26	0.13	0.01
<b>Onsite Total</b>							<b>3.93</b>	<b>0.39</b>	<b>0.20</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	100	0.003	0.001	0.77	0.19	0.04	0.01
Worker Commute	4	Unpaved	1.5	100	1.102	0.110	6.61	0.66	0.00	0.00
<b>Offsite Total</b>							<b>7.38</b>	<b>0.85</b>	<b>0.04</b>	<b>0.01</b>
<b>Total</b>							<b>11.31</b>	<b>1.24</b>	<b>0.24</b>	<b>0.03</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 29**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Asphalting**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	5.70	21.43	50.61	0.08	1.90	1.75	7,304.9
Onsite Motor Vehicle Exhaust	0.01	0.08	0.43	0.00	0.01	0.01	94.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	59.45	5.94	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
Asphaltic Paving VOC	0.3	--	--	--	--	--	--
<b>Onsite Total</b>	<b>6.05</b>	<b>21.51</b>	<b>51.05</b>	<b>0.08</b>	<b>61.37</b>	<b>7.70</b>	<b>7399.15</b>
Offsite Motor Vehicle Exhaust	0.64	5.68	23.05	0.05	0.79	0.42	5,183.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	93.97	10.22	
<b>Offsite Total</b>	<b>0.64</b>	<b>5.68</b>	<b>23.05</b>	<b>0.05</b>	<b>94.76</b>	<b>10.63</b>	<b>5183.1</b>
<b>Total</b>	<b>6.70</b>	<b>27.19</b>	<b>74.09</b>	<b>0.13</b>	<b>156.12</b>	<b>18.34</b>	<b>12582.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.32	0.76	0.00	0.03	0.03	109.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	1.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.89	0.09	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.09</b>	<b>0.32</b>	<b>0.76</b>	<b>0.00</b>	<b>0.92</b>	<b>0.12</b>	<b>110.6</b>
Offsite Motor Vehicle Exhaust	0.01	0.09	0.35	0.00	0.01	0.01	77.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.26	0.14	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.09</b>	<b>0.35</b>	<b>0.00</b>	<b>1.27</b>	<b>0.14</b>	<b>77.7</b>
<b>Total</b>	<b>0.10</b>	<b>0.41</b>	<b>1.11</b>	<b>0.00</b>	<b>2.19</b>	<b>0.26</b>	<b>188.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Paving Roller	200	2	30	10
Asphalt Paver	250	1	30	10
Tractor	150	1	30	10
Asphalt Curb Machine	250	1	30	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Paving Roller	200	0.104	0.346	0.995	0.002	0.033	0.031	152.952	0.009	0.004	Rollers
Asphalt Paver	250	0.176	0.537	1.546	0.002	0.059	0.054	194.197	0.016	0.005	Pavers
Tractor	150	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Asphalt Curb Machine	250	0.108	0.330	0.969	0.001	0.036	0.033	122.182	0.010	0.003	Paving Equipment

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Paving Roller	3.12	10.38	29.85	0.006	0.99	0.093	48.8856	0.027	0.012	31.15
Asphalt Paver	5.28	15.91	46.38	0.006	1.77	1.62	63.5491	0.048	0.015	24.75
Tractor	2.37	17.52	16.71	0.003	0.86	0.81	30.3888	0.021	0.009	15.225
Asphalt Curb Machine	3.24	9.90	28.67	0.003	1.08	1.00	40.5456	0.030	0.009	15.225

**Table 29**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Asphalting**

Paving Roller	2.08	6.92	19.89	0.03	0.67	0.61	3059.05	0.19	0.08	3,087.6
Asphalt Paver	1.76	5.37	15.46	0.02	0.59	0.54	1941.97	0.16	0.05	1,961.0
Tractor	0.79	5.84	5.57	0.01	0.29	0.27	1012.96	0.07	0.03	1,022.7
Asphalt Curb Machine	1.08	3.30	9.69	0.01	0.36	0.33	1221.82	0.10	0.03	1,233.7
<b>Total</b>	<b>5.70</b>	<b>21.43</b>	<b>50.61</b>	<b>0.08</b>	<b>1.90</b>	<b>1.75</b>	<b>7235.80</b>	<b>0.51</b>	<b>0.19</b>	<b>7304.95</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
Paving Roller	0.03	0.10	0.30	0.00	0.01	0.01	45.89	0.00	0.00	46.3
Asphalt Paver	0.03	0.08	0.23	0.00	0.01	0.01	29.13	0.00	0.00	29.4
Tractor	0.01	0.09	0.08	0.00	0.00	0.00	15.19	0.00	0.00	15.3
Asphalt Curb Machine	0.02	0.05	0.15	0.00	0.01	0.00	18.33	0.00	0.00	18.5
<b>Total</b>	<b>0.09</b>	<b>0.32</b>	<b>0.76</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>108.54</b>	<b>0.01</b>	<b>0.00</b>	<b>109.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Stake Truck	1	30	N/A	1
Dump Truck	1	30	N/A	1
Crew Truck	2	30	N/A	1
Asphalt Delivery Truck	8	30	N/A	1
Aggregate Base Delivery Truck	15	30	N/A	1
<b>Offsite</b>				
Asphalt Delivery Truck	8	30	N/A	60
Aggregate Base Delivery Truck	15	30	N/A	60
Worker Commute	6	30	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 1,710 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 3,250 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO <sub>2</sub> (lb/mi) <sup>a</sup>	CH <sub>4</sub> (lb/mi) <sup>a</sup>	N <sub>2</sub> O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Crew Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Asphalt Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Aggregate Base Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
<b>Offsite</b>										
Asphalt Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 29**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Asphalting**

Aggregate Base Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Stake Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Crew Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.08	0.00	0.00	7.16
Asphalt Delivery Truck	0.00	0.02	0.13	0.00	0.00	0.00	28.32	0.00	0.00	28.62
Aggregate Base Delivery Truck	0.01	0.04	0.25	0.00	0.01	0.00	53.10	0.00	0.00	53.67
<b>Onsite Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.43</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>93.20</b>	<b>0.00</b>	<b>0.00</b>	<b>94.20</b>
<b>Offsite</b>										
Asphalt Delivery Truck	0.20	1.37	7.95	0.02	0.26	0.14	1699.32	0.01	0.06	1717.48
Aggregate Base Delivery Truck	0.38	2.56	14.91	0.03	0.49	0.27	3186.23	0.02	0.11	3220.27
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.64</b>	<b>5.68</b>	<b>23.05</b>	<b>0.05</b>	<b>0.79</b>	<b>0.42</b>	<b>5128.13</b>	<b>0.04</b>	<b>0.17</b>	<b>5183.09</b>
<b>Total</b>	<b>0.66</b>	<b>5.76</b>	<b>23.48</b>	<b>0.05</b>	<b>0.80</b>	<b>0.43</b>	<b>5221.33</b>	<b>0.04</b>	<b>0.18</b>	<b>5277.30</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Aggregate Base Delivery Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.00	0.00	0.81
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.97</b>	<b>0.00</b>	<b>0.00</b>	<b>0.98</b>
<b>Offsite</b>										
Asphalt Delivery Truck	0.00	0.02	0.12	0.00	0.00	0.00	25.49	0.00	0.00	25.76
Aggregate Base Delivery Truck	0.01	0.04	0.22	0.00	0.01	0.00	47.79	0.00	0.00	48.30
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	3.64	0.00	0.00	3.68
<b>Offsite Total</b>	<b>0.01</b>	<b>0.09</b>	<b>0.35</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>76.92</b>	<b>0.00</b>	<b>0.00</b>	<b>77.75</b>
<b>Total</b>	<b>0.01</b>	<b>0.09</b>	<b>0.35</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>77.90</b>	<b>0.00</b>	<b>0.00</b>	<b>78.73</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										

**Table 29**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Asphalting**

Stake Truck	1	Unpaved	1	30	2.273	0.227	2.27	0.23	0.03	0.00
Dump Truck	1	Unpaved	1	30	2.273	0.227	2.27	0.23	0.03	0.00
Crew Truck	2	Unpaved	1	30	1.311	0.131	2.62	0.26	0.04	0.00
Asphalt Delivery Truck	8	Unpaved	1	30	2.273	0.227	18.18	1.82	0.27	0.03
Aggregate Base Delivery Truck	15	Unpaved	1	30	2.273	0.227	34.10	3.41	0.51	0.05
<b>Onsite Total</b>							<b>59.45</b>	<b>5.94</b>	<b>0.89</b>	<b>0.09</b>
<b>Offsite</b>										
Asphalt Delivery Truck	8	Unpaved	1.5	30	2.273	0.227	27.28	2.73	0.41	0.04
Asphalt Delivery Truck	8	Paved	58.5	30	0.003	0.001	1.56	0.38	0.02	0.01
Aggregate Base Delivery Truck	15	Unpaved	1.5	30	2.273	0.227	51.14	5.11	0.77	0.08
Aggregate Base Delivery Truck	15	Paved	58.5	30	0.003	0.001	2.92	0.72	0.04	0.01
Worker Commute	6	Paved	58	30	0.003	0.001	1.16	0.28	0.02	0.00
Worker Commute	6	Unpaved	1.5	30	1.102	0.110	9.92	0.99	0.00	0.00
<b>Offsite Total</b>							<b>93.97</b>	<b>10.22</b>	<b>1.26</b>	<b>0.14</b>
<b>Total</b>							<b>153.42</b>	<b>16.16</b>	<b>2.15</b>	<b>0.23</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Asphaltic Paving VOC Emissions**

Area Paved (acre/day) <sup>a</sup>	Emission Factor (lb/acre) <sup>b</sup>	VOC (lb/day) <sup>c</sup>
0.13	2.62	0.3

a Based on 169,000 sq. ft. of area paved in 30 days

b From CalEEMod User's Guide

c Emissions [lb/day] = Emission factor [lb/acre] x Area paved [acre/day]



**Table 30**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Transformer Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.90	7.62	15.41	0.03	0.65	0.60	2,314.2
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	2.7
Onsite Motor Vehicle Fugitive PM	--	--	--	--	4.89	0.49	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.90</b>	<b>7.63</b>	<b>15.42</b>	<b>0.03</b>	<b>5.55</b>	<b>1.09</b>	<b>2316.9</b>
Offsite Motor Vehicle Exhaust	0.15	4.37	0.48	0.01	0.09	0.00	613.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	27.69	3.19	
<b>Offsite Total</b>	<b>0.15</b>	<b>4.37</b>	<b>0.48</b>	<b>0.01</b>	<b>27.78</b>	<b>3.19</b>	<b>613.4</b>
<b>Total</b>	<b>2.05</b>	<b>12.00</b>	<b>15.89</b>	<b>0.03</b>	<b>33.32</b>	<b>4.28</b>	<b>2930.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.08	0.36	0.65	0.00	0.03	0.03	98.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.29	0.03	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.08</b>	<b>0.36</b>	<b>0.65</b>	<b>0.00</b>	<b>0.32</b>	<b>0.06</b>	<b>98.3</b>
Offsite Motor Vehicle Exhaust	0.01	0.26	0.03	0.00	0.01	0.00	36.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.17	0.04	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.26</b>	<b>0.03</b>	<b>0.00</b>	<b>0.18</b>	<b>0.04</b>	<b>36.8</b>
<b>Total</b>	<b>0.09</b>	<b>0.63</b>	<b>0.68</b>	<b>0.00</b>	<b>0.50</b>	<b>0.10</b>	<b>135.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Forklift	100	2	120	8
50 Ton Crane	200	2	75	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
50 Ton Crane	200	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

<sup>a</sup> From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Forklift	0.50	3.41	3.38	0.01	0.24	0.22	499.15	0.05	0.01	504.2
50 Ton Crane	1.40	4.21	12.04	0.02	0.41	0.38	1792.93	0.13	0.05	1,810.0
<b>Total</b>	<b>1.90</b>	<b>7.62</b>	<b>15.41</b>	<b>0.03</b>	<b>0.65</b>	<b>0.60</b>	<b>2292.08</b>	<b>0.17</b>	<b>0.06</b>	<b>2314.18</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

**Table 30**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Transformer Assembly**

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Forklift	0.03	0.20	0.20	0.00	0.01	0.01	29.95	0.00	0.00	30.2
50 Ton Crane	0.05	0.16	0.45	0.00	0.02	0.01	67.23	0.00	0.00	67.9
<b>Total</b>	<b>0.08</b>	<b>0.36</b>	<b>0.65</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>97.18</b>	<b>0.01</b>	<b>0.00</b>	<b>98.12</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	120	N/A	1
Crew Truck	2	120	N/A	1
<b>Offsite</b>				
Worker Commute	15	120	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.65</b>	<b>0.00</b>	<b>0.00</b>	<b>2.69</b>
<b>Offsite</b>										
Worker Commute	0.15	4.37	0.48	0.01	0.09	0.00	606.44	0.04	0.02	613.36
<b>Offsite Total</b>	<b>0.15</b>	<b>4.37</b>	<b>0.48</b>	<b>0.01</b>	<b>0.09</b>	<b>0.00</b>	<b>606.44</b>	<b>0.04</b>	<b>0.02</b>	<b>613.36</b>
<b>Total</b>	<b>0.15</b>	<b>4.38</b>	<b>0.48</b>	<b>0.01</b>	<b>0.09</b>	<b>0.00</b>	<b>609.09</b>	<b>0.04</b>	<b>0.02</b>	<b>616.05</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 30**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Transformer Assembly**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.16</b>
<b>Offsite</b>										
Worker Commute	0.01	0.26	0.03	0.00	0.01	0.00	36.39	0.00	0.00	36.80
<b>Offsite Total</b>	<b>0.01</b>	<b>0.26</b>	<b>0.03</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>36.39</b>	<b>0.00</b>	<b>0.00</b>	<b>36.80</b>
<b>Total</b>	<b>0.01</b>	<b>0.26</b>	<b>0.03</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>36.55</b>	<b>0.00</b>	<b>0.00</b>	<b>36.96</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Unpaved	1	120	2.273	0.227	2.27	0.23	0.14	0.01
Crew Truck	2	Unpaved	1	120	1.311	0.131	2.62	0.26	0.16	0.02
<b>Onsite Total</b>							<b>4.89</b>	<b>0.49</b>	<b>0.29</b>	<b>0.03</b>
<b>Offsite</b>										
Worker Commute	15	Paved	58	120	0.003	0.001	2.90	0.71	0.17	0.04
Worker Commute	15	Unpaved	1.5	120	1.102	0.110	24.79	2.48	0.00	0.00
<b>Offsite Total</b>							<b>27.69</b>	<b>3.19</b>	<b>0.17</b>	<b>0.04</b>
<b>Total</b>							<b>32.58</b>	<b>3.68</b>	<b>0.47</b>	<b>0.07</b>

a From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 31  
Alternative Substation Construction Emissions - Full Build Out  
Testing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	1.5
Onsite Motor Vehicle Fugitive PM	--	--	--	--	2.62	0.26	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.62</b>	<b>0.26</b>	<b>1.5</b>
Offsite Motor Vehicle Exhaust	0.15	4.37	0.48	0.01	0.09	0.00	613.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	27.69	3.19	
<b>Offsite Total</b>	<b>0.15</b>	<b>4.37</b>	<b>0.48</b>	<b>0.01</b>	<b>27.78</b>	<b>3.19</b>	<b>613.4</b>
<b>Total</b>	<b>0.15</b>	<b>4.37</b>	<b>0.48</b>	<b>0.01</b>	<b>30.40</b>	<b>3.46</b>	<b>614.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.24	0.02	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.24</b>	<b>0.02</b>	<b>0.1</b>
Offsite Motor Vehicle Exhaust	0.01	0.39	0.04	0.00	0.01	0.00	55.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.26	0.06	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.39</b>	<b>0.04</b>	<b>0.00</b>	<b>0.27</b>	<b>0.06</b>	<b>55.2</b>
<b>Total</b>	<b>0.01</b>	<b>0.39</b>	<b>0.04</b>	<b>0.00</b>	<b>0.50</b>	<b>0.09</b>	<b>55.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 31  
Alternative Substation Construction Emissions - Full Build Out  
Testing**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Crew Truck	2	180	N/A	1
<b>Offsite</b>				
Worker Commute	15	180	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.00	0.00	1.52
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.50</b>	<b>0.00</b>	<b>0.00</b>	<b>1.52</b>
<b>Offsite</b>										
Worker Commute	0.15	4.37	0.48	0.01	0.09	0.00	606.44	0.04	0.02	613.36
<b>Offsite Total</b>	<b>0.15</b>	<b>4.37</b>	<b>0.48</b>	<b>0.01</b>	<b>0.09</b>	<b>0.00</b>	<b>606.44</b>	<b>0.04</b>	<b>0.02</b>	<b>613.36</b>
<b>Total</b>	<b>0.15</b>	<b>4.37</b>	<b>0.48</b>	<b>0.01</b>	<b>0.09</b>	<b>0.00</b>	<b>607.94</b>	<b>0.04</b>	<b>0.02</b>	<b>614.88</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.14
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.13</b>	<b>0.00</b>	<b>0.00</b>	<b>0.14</b>
<b>Offsite</b>										
Worker Commute	0.01	0.39	0.04	0.00	0.01	0.00	54.58	0.00	0.00	55.20

**Table 31**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Testing**

<b>Offsite Total</b>	<b>0.01</b>	<b>0.39</b>	<b>0.04</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>54.58</b>	<b>0.00</b>	<b>0.00</b>	<b>55.20</b>
<b>Total</b>	<b>0.01</b>	<b>0.39</b>	<b>0.04</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>54.71</b>	<b>0.00</b>	<b>0.00</b>	<b>55.34</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Crew Truck	2	Unpaved	1	180	1.311	0.131	2.62	0.26	0.24	0.02
<b>Onsite Total</b>							<b>2.62</b>	<b>0.26</b>	<b>0.24</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	15	Paved	58	180	0.003	0.001	2.90	0.71	0.26	0.06
Worker Commute	15	Unpaved	1.5	180	1.102	0.110	24.79	2.48	0.00	0.00
<b>Offsite Total</b>							<b>27.69</b>	<b>3.19</b>	<b>0.26</b>	<b>0.06</b>
<b>Total</b>							<b>30.31</b>	<b>3.45</b>	<b>0.50</b>	<b>0.09</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 32**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.06	0.01	0.00	0.00	0.00	9.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	8.81	0.88	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>8.81</b>	<b>0.88</b>	<b>9.4</b>
Offsite Motor Vehicle Exhaust	0.15	4.37	0.48	0.01	0.09	0.00	613.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	27.69	3.19	
<b>Offsite Total</b>	<b>0.15</b>	<b>4.37</b>	<b>0.48</b>	<b>0.01</b>	<b>27.78</b>	<b>3.19</b>	<b>613.4</b>
<b>Total</b>	<b>0.15</b>	<b>4.43</b>	<b>0.49</b>	<b>0.01</b>	<b>36.59</b>	<b>4.07</b>	<b>622.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.22	0.02	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.22</b>	<b>0.02</b>	<b>0.2</b>
Offsite Motor Vehicle Exhaust	0.00	0.11	0.01	0.00	0.00	0.00	15.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.11</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>15.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.11</b>	<b>0.01</b>	<b>0.00</b>	<b>0.30</b>	<b>0.04</b>	<b>15.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 32**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Survey**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Survey Truck	2	50	N/A	4
<b>Offsite</b>				
Worker Commute	15	50	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Survey Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.06	0.01	0.00	0.00	0.00	9.24	0.00	0.00	9.37
<b>Onsite Total</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.24</b>	<b>0.00</b>	<b>0.00</b>	<b>9.37</b>
<b>Offsite</b>										
Worker Commute	0.15	4.37	0.48	0.01	0.09	0.00	606.44	0.04	0.02	613.36
<b>Offsite Total</b>	<b>0.15</b>	<b>4.37</b>	<b>0.48</b>	<b>0.01</b>	<b>0.09</b>	<b>0.00</b>	<b>606.44</b>	<b>0.04</b>	<b>0.02</b>	<b>613.36</b>
<b>Total</b>	<b>0.15</b>	<b>4.43</b>	<b>0.49</b>	<b>0.01</b>	<b>0.09</b>	<b>0.00</b>	<b>615.68</b>	<b>0.04</b>	<b>0.02</b>	<b>622.73</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]



**Table 32**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Survey**

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.23
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.23</b>	<b>0.00</b>	<b>0.00</b>	<b>0.23</b>
<b>Offsite</b>										
Worker Commute	0.00	0.11	0.01	0.00	0.00	0.00	15.16	0.00	0.00	15.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.11</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>15.16</b>	<b>0.00</b>	<b>0.00</b>	<b>15.33</b>
<b>Total</b>	<b>0.00</b>	<b>0.11</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>15.39</b>	<b>0.00</b>	<b>0.00</b>	<b>15.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Survey Truck	2	Unpaved	4	50	1.102	0.110	8.81	0.88	0.22	0.02
<b>Onsite Total</b>							<b>8.81</b>	<b>0.88</b>	<b>0.22</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	15	Paved	58	50	0.003	0.001	2.90	0.71	0.07	0.02
Worker Commute	15	Unpaved	1.5	50	1.102	0.110	24.79	2.48	0.00	0.00
<b>Offsite Total</b>							<b>27.69</b>	<b>3.19</b>	<b>0.07</b>	<b>0.02</b>
<b>Total</b>							<b>36.50</b>	<b>4.07</b>	<b>0.29</b>	<b>0.04</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 32**  
**Alternative Substation Construction Emissions - Full Build Out**  
**Survey**

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 33**  
**Modifications to Coolwater Switchyard**  
**Civil**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.63	19.06	24.20	0.06	1.34	1.23	5,454.6
Onsite Motor Vehicle Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	8.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.63</b>	<b>19.07</b>	<b>24.23</b>	<b>0.06</b>	<b>1.35</b>	<b>1.24</b>	<b>5462.9</b>
Offsite Motor Vehicle Exhaust	0.12	2.60	1.84	0.01	0.10	0.03	670.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.86	0.46	
<b>Offsite Total</b>	<b>0.12</b>	<b>2.60</b>	<b>1.84</b>	<b>0.01</b>	<b>1.96</b>	<b>0.49</b>	<b>670.6</b>
<b>Total</b>	<b>3.75</b>	<b>21.67</b>	<b>26.08</b>	<b>0.06</b>	<b>3.31</b>	<b>1.72</b>	<b>6133.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.11	0.57	0.73	0.00	0.04	0.04	163.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.11</b>	<b>0.57</b>	<b>0.73</b>	<b>0.00</b>	<b>0.04</b>	<b>0.04</b>	<b>163.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.06	0.00	0.00	0.00	20.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.06	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.06</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>20.1</b>
<b>Total</b>	<b>0.11</b>	<b>0.65</b>	<b>0.78</b>	<b>0.00</b>	<b>0.10</b>	<b>0.05</b>	<b>184.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	1	60	8
Excavator	85	2	60	8
Skip Loader	350	1	60	5
Forklift	100	1	60	4
Trencher	75	1	60	4
Bobcat	75	1	60	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Excavator	85	0.083	0.507	0.529	0.001	0.039	0.036	73.557	0.008	0.002	Excavators
Skip Loader	350	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
Trencher	75	0.108	0.456	0.665	0.001	0.055	0.051	64.837	0.010	0.002	Trenchers
Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders

<sup>a</sup> From Table 110

**Table 33**  
**Modifications to Coolwater Switchyard**  
**Civil**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	0.83	4.40	5.00	0.02	0.15	0.14	2488.23	0.07	0.06	2,509.8
Excavator	1.33	8.10	8.46	0.01	0.63	0.58	1176.91	0.12	0.03	1,189.0
Skip Loader	0.80	2.79	6.28	0.01	0.22	0.21	1183.98	0.07	0.03	1,195.0
Forklift	0.12	0.85	0.84	0.00	0.06	0.05	124.79	0.01	0.00	126.0
Trencher	0.43	1.82	2.66	0.00	0.22	0.20	259.35	0.04	0.01	262.3
Bobcat	0.12	1.08	0.96	0.00	0.06	0.05	170.89	0.01	0.00	172.5
<b>Total</b>	<b>3.63</b>	<b>19.06</b>	<b>24.20</b>	<b>0.06</b>	<b>1.34</b>	<b>1.23</b>	<b>5404.15</b>	<b>0.33</b>	<b>0.14</b>	<b>5454.62</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.02	0.13	0.15	0.00	0.00	0.00	74.65	0.00	0.00	75.3
Excavator	0.04	0.24	0.25	0.00	0.02	0.02	35.31	0.00	0.00	35.7
Skip Loader	0.02	0.08	0.19	0.00	0.01	0.01	35.52	0.00	0.00	35.9
Forklift	0.00	0.03	0.03	0.00	0.00	0.00	3.74	0.00	0.00	3.8
Trencher	0.01	0.05	0.08	0.00	0.01	0.01	7.78	0.00	0.00	7.9
Bobcat	0.00	0.03	0.03	0.00	0.00	0.00	5.13	0.00	0.00	5.2
<b>Total</b>	<b>0.11</b>	<b>0.57</b>	<b>0.73</b>	<b>0.00</b>	<b>0.04</b>	<b>0.04</b>	<b>162.12</b>	<b>0.01</b>	<b>0.00</b>	<b>163.64</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Dump Truck	1	60	N/A	0.5
Concrete Truck	1	60	N/A	0.5
Water Truck	2	60	N/A	0.5
Tool Truck	1	60	N/A	0.5
Inspection Services	1	20	N/A	0.5
<b>Offsite</b>				
Water Truck	2	60	N/A	18
Concrete Truck	1	60	N/A	60
Worker Commute	8	60	N/A	58

<sup>a</sup> Concrete trucks based on 20,000 CY over 200 days and 10 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
---------	----------	-----------------------------	----------------------------	-----------------------------	-----------------------------	------------------------------	-------------------------------	-----------------------------	-----------------------------	-----------------------------

**Table 33**  
**Modifications to Coolwater Switchyard**  
**Civil**

<b>Onsite</b>										
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.24</b>	<b>0.00</b>	<b>0.00</b>	<b>8.33</b>
<b>Offsite</b>										
Water Truck	0.02	0.10	0.60	0.00	0.02	0.01	127.45	0.00	0.00	128.81
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.12</b>	<b>2.60</b>	<b>1.84</b>	<b>0.01</b>	<b>0.10</b>	<b>0.03</b>	<b>663.30</b>	<b>0.02</b>	<b>0.02</b>	<b>670.62</b>
<b>Total</b>	<b>0.12</b>	<b>2.62</b>	<b>1.88</b>	<b>0.01</b>	<b>0.10</b>	<b>0.03</b>	<b>671.53</b>	<b>0.02</b>	<b>0.02</b>	<b>678.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.24</b>	<b>0.00</b>	<b>0.00</b>	<b>0.24</b>
<b>Offsite</b>										
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.82	0.00	0.00	3.86
Concrete Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.37	0.00	0.00	6.44
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.70	0.00	0.00	9.81
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>19.90</b>	<b>0.00</b>	<b>0.00</b>	<b>20.12</b>

**Table 33**  
**Modifications to Coolwater Switchyard**  
**Civil**

<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>20.13</b>	<b>0.00</b>	<b>0.00</b>	<b>20.36</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	--------------	-------------	-------------	--------------

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Dump Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Concrete Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Water Truck	2	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Tool Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Inspection Services	1	Paved	0.5	20	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Water Truck	2	Paved	17.5	60	0.003	0.001	0.12	0.03	0.00	0.00
Concrete Truck	1	Paved	59.5	60	0.003	0.001	0.20	0.05	0.01	0.00
Worker Commute	8	Paved	58	60	0.003	0.001	1.54	0.38	0.05	0.01
<b>Offsite Total</b>							<b>1.86</b>	<b>0.46</b>	<b>0.06</b>	<b>0.01</b>
<b>Total</b>							<b>1.87</b>	<b>0.46</b>	<b>0.06</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 34**  
**Modifications to Coolwater Switchyard**  
**Electrical**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.77	7.52	13.97	0.02	0.68	0.63	2,076.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	2.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.77</b>	<b>7.53</b>	<b>13.97</b>	<b>0.02</b>	<b>0.69</b>	<b>0.63</b>	<b>2078.3</b>
Offsite Motor Vehicle Exhaust	0.08	2.33	0.25	0.00	0.05	0.00	327.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.54	0.38	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>1.59</b>	<b>0.38</b>	<b>327.1</b>
<b>Total</b>	<b>1.85</b>	<b>9.86</b>	<b>14.23</b>	<b>0.03</b>	<b>2.29</b>	<b>1.01</b>	<b>2405.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.06	0.26	0.49	0.00	0.02	0.02	72.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.06</b>	<b>0.26</b>	<b>0.49</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>72.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.01	0.00	0.00	0.00	11.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>11.4</b>
<b>Total</b>	<b>0.06</b>	<b>0.34</b>	<b>0.50</b>	<b>0.00</b>	<b>0.08</b>	<b>0.04</b>	<b>84.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Reach Manlift	75	1	70	5
Manlift	75	2	70	5
14 Ton Crane	250	1	70	3
150 Ton Crane	300	1	70	4
5 Ton Crane	250	1	70	3
Forklift	100	1	70	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Reach Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
14 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
150 Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
5 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts

<sup>a</sup> From Table 110

**Table 34**  
**Modifications to Coolwater Switchyard**  
**Electrical**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Reach Manlift	0.21	1.18	1.51	0.00	0.11	0.10	190.19	0.02	0.00	192.1
Manlift	0.42	2.35	3.03	0.00	0.22	0.20	380.38	0.04	0.01	384.3
14 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
150 Ton Crane	0.53	1.77	4.28	0.01	0.15	0.14	719.76	0.05	0.02	726.6
5 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
Forklift	0.09	0.64	0.63	0.00	0.04	0.04	93.59	0.01	0.00	94.5
<b>Total</b>	<b>1.77</b>	<b>7.52</b>	<b>13.97</b>	<b>0.02</b>	<b>0.68</b>	<b>0.63</b>	<b>2056.26</b>	<b>0.16</b>	<b>0.05</b>	<b>2076.22</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Reach Manlift	0.01	0.04	0.05	0.00	0.00	0.00	6.66	0.00	0.00	6.7
Manlift	0.01	0.08	0.11	0.00	0.01	0.01	13.31	0.00	0.00	13.4
14 Ton Crane	0.01	0.03	0.08	0.00	0.00	0.00	11.77	0.00	0.00	11.9
150 Ton Crane	0.02	0.06	0.15	0.00	0.01	0.00	25.19	0.00	0.00	25.4
5 Ton Crane	0.01	0.03	0.08	0.00	0.00	0.00	11.77	0.00	0.00	11.9
Forklift	0.00	0.02	0.02	0.00	0.00	0.00	3.28	0.00	0.00	3.3
<b>Total</b>	<b>0.06</b>	<b>0.26</b>	<b>0.49</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>71.97</b>	<b>0.01</b>	<b>0.00</b>	<b>72.67</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Pick-up Truck	2	70	N/A	0.5
Crew Truck	2	70	N/A	0.5
Inspection Services	1	20	N/A	0.5
<b>Offsite</b>				
Worker Commute	8	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Pick-up Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										



**Table 34**  
**Modifications to Coolwater Switchyard**  
**Electrical**

Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05
----------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.07</b>	<b>0.00</b>	<b>0.00</b>	<b>2.10</b>
<b>Offsite</b>										
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.33</b>	<b>0.25</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>323.43</b>	<b>0.02</b>	<b>0.01</b>	<b>327.13</b>
<b>Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.26</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>325.51</b>	<b>0.02</b>	<b>0.01</b>	<b>329.23</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>0.00</b>	<b>0.06</b>
<b>Offsite</b>										
Worker Commute	0.00	0.08	0.01	0.00	0.00	0.00	11.32	0.00	0.00	11.45
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>11.32</b>	<b>0.00</b>	<b>0.00</b>	<b>11.45</b>
<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>11.38</b>	<b>0.00</b>	<b>0.00</b>	<b>11.51</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Pick-up Truck	2	Paved	0.5	70	0.003	0.001	0.00	0.00	0.00	0.00
Crew Truck	2	Paved	0.5	70	0.003	0.001	0.00	0.00	0.00	0.00
Inspection Services	1	Paved	0.5	20	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	8	Paved	58	70	0.003	0.001	1.54	0.38	0.05	0.01
<b>Offsite Total</b>							<b>1.54</b>	<b>0.38</b>	<b>0.05</b>	<b>0.01</b>

**Table 34**  
**Modifications to Coolwater Switchyard**  
**Electrical**

<b>Total</b>							<b>1.55</b>	<b>0.38</b>	<b>0.05</b>	<b>0.01</b>
--------------	--	--	--	--	--	--	-------------	-------------	-------------	-------------

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 35  
Modifications to Coolwater Switchyard  
Wiring**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.2</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.39	0.09	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>83.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	2.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>2.5</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>2.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 35**  
**Modifications to Coolwater Switchyard**  
**Wiring**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Wiring Truck	1	60	N/A	0.5
Pick-up Truck	1	60	N/A	0.5
<b>Offsite</b>				
Worker Commute	2	60	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Wiring Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Pick-up Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.15</b>	<b>0.00</b>	<b>0.00</b>	<b>1.17</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>82.01</b>	<b>0.01</b>	<b>0.00</b>	<b>82.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02

**Table 35  
Modifications to Coolwater Switchyard  
Wiring**

Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>
<b>Offsite</b>										
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.43	0.00	0.00	2.45
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.43</b>	<b>0.00</b>	<b>0.00</b>	<b>2.45</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.46</b>	<b>0.00</b>	<b>0.00</b>	<b>2.49</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Wiring Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Pick-up Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	60	0.003	0.001	0.39	0.09	0.01	0.00
<b>Offsite Total</b>							<b>0.39</b>	<b>0.09</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>0.39</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 36  
Modifications to Coolwater Switchyard  
MEER**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.79	2.66	6.43	0.01	0.23	0.21	1,089.8
Onsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.44</b>	<b>0.01</b>	<b>0.24</b>	<b>0.21</b>	<b>1092.6</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.84</b>	<b>3.83</b>	<b>6.56</b>	<b>0.01</b>	<b>1.03</b>	<b>0.41</b>	<b>1256.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	5.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.6</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	6.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>6.5</b>
<b>Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.04</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>12.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30 Ton Crane	350	1	10	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30 Ton Crane	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30 Ton Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
<b>Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.43</b>	<b>0.01</b>	<b>0.23</b>	<b>0.21</b>	<b>1079.64</b>	<b>0.07</b>	<b>0.03</b>	<b>1089.84</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 36**  
**Modifications to Coolwater Switchyard**  
**MEER**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30 Ton Crane	0.00	0.01	0.03	0.00	0.00	0.00	5.40	0.00	0.00	5.4
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.40</b>	<b>0.00</b>	<b>0.00</b>	<b>5.45</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	80	N/A	0.5
Stake Truck	1	80	N/A	0.5
Wiring Truck	1	80	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Wiring Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.72</b>	<b>0.00</b>	<b>0.00</b>	<b>2.75</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.14</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>164.44</b>	<b>0.01</b>	<b>0.01</b>	<b>166.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 36**  
**Modifications to Coolwater Switchyard**  
**MEER**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>
<b>Offsite</b>										
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.47	0.00	0.00	6.54
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.47</b>	<b>0.00</b>	<b>0.00</b>	<b>6.54</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.58</b>	<b>0.00</b>	<b>0.00</b>	<b>6.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
Stake Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
Wiring Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	80	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>0.78</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 37  
Modifications to Coolwater Switchyard  
Maintenance**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	1.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>1.1</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>164.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 37  
Modifications to Coolwater Switchyard  
Maintenance**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Foreman Truck	1	40	N/A	0.5
Crew Truck	2	40	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	40	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Foreman Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.12</b>	<b>0.00</b>	<b>0.00</b>	<b>1.14</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.84</b>	<b>0.01</b>	<b>0.01</b>	<b>164.70</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01

**Table 37  
Modifications to Coolwater Switchyard  
Maintenance**

Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>	<b>0.00</b>	<b>0.00</b>	<b>3.27</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.26</b>	<b>0.00</b>	<b>0.00</b>	<b>3.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Foreman Truck	1	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
Crew Truck	2	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	40	0.003	0.001	0.77	0.19	0.02	0.00
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>0.78</b>	<b>0.19</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 38  
Modifications to Coolwater Switchyard  
Testing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.4</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.04	0.00	0.00	0.00	0.00	5.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 38  
Modifications to Coolwater Switchyard  
Testing**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Crew Truck	1	70	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>	<b>0.00</b>	<b>0.00</b>	<b>0.38</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.09</b>	<b>0.01</b>	<b>0.01</b>	<b>163.94</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72

**Table 38  
Modifications to Coolwater Switchyard  
Testing**

<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.66</b>	<b>0.00</b>	<b>0.00</b>	<b>5.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.67</b>	<b>0.00</b>	<b>0.00</b>	<b>5.74</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Crew Truck	1	Paved	0.5	70	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	70	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 39**  
**Modifications to Coolwater Switchyard**  
**Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.2</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.39	0.09	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>83.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 39**  
**Modifications to Coolwater Switchyard**  
**Survey**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Survey Truck	2	15	N/A	0.5
<b>Offsite</b>				
Worker Commute	2	15	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Survey Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.15</b>	<b>0.00</b>	<b>0.00</b>	<b>1.17</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>82.01</b>	<b>0.01</b>	<b>0.00</b>	<b>82.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]



**Table 39**  
**Modifications to Coolwater Switchyard**  
**Survey**

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.62</b>	<b>0.00</b>	<b>0.00</b>	<b>0.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Survey Truck	2	Paved	0.5	15	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	15	0.003	0.001	0.39	0.09	0.00	0.00
<b>Offsite Total</b>							<b>0.39</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>							<b>0.39</b>	<b>0.10</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

**Table 39**  
**Modifications to Coolwater Switchyard**  
**Survey**

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 40**  
**Modifications to Lugo Substation**  
**Civil**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.83	20.16	25.45	0.06	1.38	1.27	6,082.1
Onsite Motor Vehicle Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	8.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.83</b>	<b>20.17</b>	<b>25.48</b>	<b>0.06</b>	<b>1.39</b>	<b>1.27</b>	<b>6090.4</b>
Offsite Motor Vehicle Exhaust	0.14	3.19	1.91	0.01	0.11	0.03	752.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2.25	0.55	
<b>Offsite Total</b>	<b>0.14</b>	<b>3.19</b>	<b>1.91</b>	<b>0.01</b>	<b>2.36</b>	<b>0.58</b>	<b>752.4</b>
<b>Total</b>	<b>3.98</b>	<b>23.36</b>	<b>27.39</b>	<b>0.07</b>	<b>3.75</b>	<b>1.85</b>	<b>6842.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.19	1.01	1.27	0.00	0.07	0.06	304.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.19</b>	<b>1.01</b>	<b>1.27</b>	<b>0.00</b>	<b>0.07</b>	<b>0.06</b>	<b>304.5</b>
Offsite Motor Vehicle Exhaust	0.01	0.16	0.10	0.00	0.01	0.00	37.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.11	0.03	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.10</b>	<b>0.00</b>	<b>0.12</b>	<b>0.03</b>	<b>37.6</b>
<b>Total</b>	<b>0.20</b>	<b>1.17</b>	<b>1.37</b>	<b>0.00</b>	<b>0.19</b>	<b>0.09</b>	<b>342.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Driller	350	1	100	10
Excavator	85	2	100	8
Skip Loader	350	1	100	5
Forklift	100	1	100	4
Trencher	75	1	100	4
Bobcat	75	1	100	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Driller	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Excavator	85	0.083	0.507	0.529	0.001	0.039	0.036	73.557	0.008	0.002	Excavators
Skip Loader	350	0.159	0.559	1.256	0.002	0.045	0.041	236.796	0.014	0.006	Rubber Tired Loaders
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
Trencher	75	0.108	0.456	0.665	0.001	0.055	0.051	64.837	0.010	0.002	Trenchers
Bobcat	75	0.029	0.269	0.241	0.001	0.014	0.013	42.723	0.003	0.001	Skid Steer Loaders

a From Table 110

**Table 40**  
**Modifications to Lugo Substation**  
**Civil**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Driller	1.03	5.51	6.25	0.03	0.19	0.17	3110.29	0.09	0.08	3,137.2
Excavator	1.33	8.10	8.46	0.01	0.63	0.58	1176.91	0.12	0.03	1,189.0
Skip Loader	0.80	2.79	6.28	0.01	0.22	0.21	1183.98	0.07	0.03	1,195.0
Forklift	0.12	0.85	0.84	0.00	0.06	0.05	124.79	0.01	0.00	126.0
Trencher	0.43	1.82	2.66	0.00	0.22	0.20	259.35	0.04	0.01	262.3
Bobcat	0.12	1.08	0.96	0.00	0.06	0.05	170.89	0.01	0.00	172.5
<b>Total</b>	<b>3.83</b>	<b>20.16</b>	<b>25.45</b>	<b>0.06</b>	<b>1.38</b>	<b>1.27</b>	<b>6026.21</b>	<b>0.35</b>	<b>0.16</b>	<b>6082.06</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Driller	0.05	0.28	0.31	0.00	0.01	0.01	155.51	0.00	0.00	156.9
Excavator	0.07	0.41	0.42	0.00	0.03	0.03	58.85	0.01	0.00	59.4
Skip Loader	0.04	0.14	0.31	0.00	0.01	0.01	59.20	0.00	0.00	59.8
Forklift	0.01	0.04	0.04	0.00	0.00	0.00	6.24	0.00	0.00	6.3
Trencher	0.02	0.09	0.13	0.00	0.01	0.01	12.97	0.00	0.00	13.1
Bobcat	0.01	0.05	0.05	0.00	0.00	0.00	8.54	0.00	0.00	8.6
<b>Total</b>	<b>0.19</b>	<b>1.01</b>	<b>1.27</b>	<b>0.00</b>	<b>0.07</b>	<b>0.06</b>	<b>301.31</b>	<b>0.02</b>	<b>0.01</b>	<b>304.10</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Dump Truck	1	100	N/A	0.5
Concrete Truck	1	100	N/A	0.5
Water Truck	2	100	N/A	0.5
Tool Truck	1	100	N/A	0.5
Inspection Services	1	20	N/A	0.5
<b>Offsite</b>				
Water Truck	2	100	N/A	18
Concrete Truck	1	100	N/A	60
Worker Commute	10	100	N/A	58

<sup>a</sup> Concrete trucks based on 20,000 CY over 200 days and 10 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
---------	----------	-----------------------------	----------------------------	-----------------------------	-----------------------------	------------------------------	-------------------------------	-----------------------------	-----------------------------	-----------------------------

**Table 40**  
**Modifications to Lugo Substation**  
**Civil**

<b>Onsite</b>										
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Tool Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.24</b>	<b>0.00</b>	<b>0.00</b>	<b>8.33</b>
<b>Offsite</b>										
Water Truck	0.02	0.10	0.60	0.00	0.02	0.01	127.45	0.00	0.00	128.81
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.10	2.91	0.32	0.00	0.06	0.00	404.29	0.02	0.01	408.91
<b>Offsite Total</b>	<b>0.14</b>	<b>3.19</b>	<b>1.91</b>	<b>0.01</b>	<b>0.11</b>	<b>0.03</b>	<b>744.16</b>	<b>0.03</b>	<b>0.02</b>	<b>752.40</b>
<b>Total</b>	<b>0.14</b>	<b>3.20</b>	<b>1.94</b>	<b>0.01</b>	<b>0.11</b>	<b>0.03</b>	<b>752.39</b>	<b>0.03</b>	<b>0.03</b>	<b>760.73</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.09
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.18
Tool Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.39</b>	<b>0.00</b>	<b>0.00</b>	<b>0.39</b>
<b>Offsite</b>										
Water Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.37	0.00	0.00	6.44
Concrete Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.01	0.15	0.02	0.00	0.00	0.00	20.21	0.00	0.00	20.45
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.10</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>37.21</b>	<b>0.00</b>	<b>0.00</b>	<b>37.62</b>

**Table 40**  
**Modifications to Lugo Substation**  
**Civil**

<b>Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.10</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>37.60</b>	<b>0.00</b>	<b>0.00</b>	<b>38.01</b>
--------------	-------------	-------------	-------------	-------------	-------------	-------------	--------------	-------------	-------------	--------------

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Dump Truck	1	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Concrete Truck	1	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Water Truck	2	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Tool Truck	1	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Inspection Services	1	Paved	0.5	20	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Water Truck	2	Paved	17.5	100	0.003	0.001	0.12	0.03	0.01	0.00
Concrete Truck	1	Paved	59.5	100	0.003	0.001	0.20	0.05	0.01	0.00
Worker Commute	10	Paved	58	100	0.003	0.001	1.93	0.47	0.10	0.02
<b>Offsite Total</b>							<b>2.25</b>	<b>0.55</b>	<b>0.11</b>	<b>0.03</b>
<b>Total</b>							<b>2.26</b>	<b>0.55</b>	<b>0.11</b>	<b>0.03</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 41  
Modifications to Lugo Substation  
Electrical**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.77	7.52	13.97	0.02	0.68	0.63	2,076.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	2.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.77</b>	<b>7.53</b>	<b>13.97</b>	<b>0.02</b>	<b>0.69</b>	<b>0.63</b>	<b>2078.3</b>
Offsite Motor Vehicle Exhaust	0.10	2.91	0.32	0.00	0.06	0.00	408.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.93	0.47	
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>1.99</b>	<b>0.48</b>	<b>408.9</b>
<b>Total</b>	<b>1.87</b>	<b>10.44</b>	<b>14.29</b>	<b>0.03</b>	<b>2.68</b>	<b>1.11</b>	<b>2487.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.09	0.38	0.70	0.00	0.03	0.03	103.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.09</b>	<b>0.38</b>	<b>0.70</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>103.9</b>
Offsite Motor Vehicle Exhaust	0.01	0.15	0.02	0.00	0.00	0.00	20.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.02	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.02</b>	<b>0.00</b>	<b>0.10</b>	<b>0.02</b>	<b>20.4</b>
<b>Total</b>	<b>0.09</b>	<b>0.52</b>	<b>0.71</b>	<b>0.00</b>	<b>0.13</b>	<b>0.06</b>	<b>124.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Reach Manlift	75	1	100	5
Manlift	75	2	100	5
14 Ton Crane	250	1	100	3
150 Ton Crane	300	1	100	4
5 Ton Crane	250	1	100	3
Forklift	100	1	100	3

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Reach Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
Manlift	75	0.042	0.235	0.303	0.000	0.022	0.020	38.038	0.004	0.001	Aerial Lifts
14 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
150 Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
5 Ton Crane	250	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts

<sup>a</sup> From Table 110

**Table 41  
Modifications to Lugo Substation  
Electrical**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Reach Manlift	0.21	1.18	1.51	0.00	0.11	0.10	190.19	0.02	0.00	192.1
Manlift	0.42	2.35	3.03	0.00	0.22	0.20	380.38	0.04	0.01	384.3
14 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
150 Ton Crane	0.53	1.77	4.28	0.01	0.15	0.14	719.76	0.05	0.02	726.6
5 Ton Crane	0.26	0.79	2.26	0.00	0.08	0.07	336.17	0.02	0.01	339.4
Forklift	0.09	0.64	0.63	0.00	0.04	0.04	93.59	0.01	0.00	94.5
<b>Total</b>	<b>1.77</b>	<b>7.52</b>	<b>13.97</b>	<b>0.02</b>	<b>0.68</b>	<b>0.63</b>	<b>2056.26</b>	<b>0.16</b>	<b>0.05</b>	<b>2076.22</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Reach Manlift	0.01	0.06	0.08	0.00	0.01	0.01	9.51	0.00	0.00	9.6
Manlift	0.02	0.12	0.15	0.00	0.01	0.01	19.02	0.00	0.00	19.2
14 Ton Crane	0.01	0.04	0.11	0.00	0.00	0.00	16.81	0.00	0.00	17.0
150 Ton Crane	0.03	0.09	0.21	0.00	0.01	0.01	35.99	0.00	0.00	36.3
5 Ton Crane	0.01	0.04	0.11	0.00	0.00	0.00	16.81	0.00	0.00	17.0
Forklift	0.00	0.03	0.03	0.00	0.00	0.00	4.68	0.00	0.00	4.7
<b>Total</b>	<b>0.09</b>	<b>0.38</b>	<b>0.70</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>102.81</b>	<b>0.01</b>	<b>0.00</b>	<b>103.81</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Pick-up Truck	2	100	N/A	0.5
Crew Truck	2	100	N/A	0.5
Inspection Services	1	20	N/A	0.5
<b>Offsite</b>				
Worker Commute	10	100	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Pick-up Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Inspection Services	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										



**Table 41**  
**Modifications to Lugo Substation**  
**Electrical**

Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05
----------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.07</b>	<b>0.00</b>	<b>0.00</b>	<b>2.10</b>
<b>Offsite</b>										
Worker Commute	0.10	2.91	0.32	0.00	0.06	0.00	404.29	0.02	0.01	408.91
<b>Offsite Total</b>	<b>0.10</b>	<b>2.91</b>	<b>0.32</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>404.29</b>	<b>0.02</b>	<b>0.01</b>	<b>408.91</b>
<b>Total</b>	<b>0.10</b>	<b>2.92</b>	<b>0.32</b>	<b>0.00</b>	<b>0.06</b>	<b>0.00</b>	<b>406.37</b>	<b>0.02</b>	<b>0.01</b>	<b>411.01</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Inspection Services	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.08</b>
<b>Offsite</b>										
Worker Commute	0.01	0.15	0.02	0.00	0.00	0.00	20.21	0.00	0.00	20.45
<b>Offsite Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>20.21</b>	<b>0.00</b>	<b>0.00</b>	<b>20.45</b>
<b>Total</b>	<b>0.01</b>	<b>0.15</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>20.30</b>	<b>0.00</b>	<b>0.00</b>	<b>20.53</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Pick-up Truck	2	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Crew Truck	2	Paved	0.5	100	0.003	0.001	0.00	0.00	0.00	0.00
Inspection Services	1	Paved	0.5	20	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	10	Paved	58	100	0.003	0.001	1.93	0.47	0.10	0.02
<b>Offsite Total</b>							<b>1.93</b>	<b>0.47</b>	<b>0.10</b>	<b>0.02</b>

**Table 41  
Modifications to Lugo Substation  
Electrical**

<b>Total</b>							<b>1.94</b>	<b>0.48</b>	<b>0.10</b>	<b>0.02</b>
--------------	--	--	--	--	--	--	-------------	-------------	-------------	-------------

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 42  
Modifications to Lugo Substation  
Wiring**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.2</b>
Offsite Motor Vehicle Exhaust	0.06	1.75	0.19	0.00	0.04	0.00	245.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.16	0.28	
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>1.19</b>	<b>0.29</b>	<b>245.3</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>1.20</b>	<b>0.29</b>	<b>246.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	7.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>7.4</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>7.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 42**  
**Modifications to Lugo Substation**  
**Wiring**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Wiring Truck	1	60	N/A	0.5
Pick-up Truck	1	60	N/A	0.5
<b>Offsite</b>				
Worker Commute	6	60	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Wiring Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Pick-up Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.15</b>	<b>0.00</b>	<b>0.00</b>	<b>1.17</b>
<b>Offsite</b>										
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>242.58</b>	<b>0.01</b>	<b>0.01</b>	<b>245.34</b>
<b>Total</b>	<b>0.06</b>	<b>1.76</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>243.73</b>	<b>0.01</b>	<b>0.01</b>	<b>246.52</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02

**Table 42**  
**Modifications to Lugo Substation**  
**Wiring**

Pick-up Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>
<b>Offsite</b>										
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	7.28	0.00	0.00	7.36
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.28</b>	<b>0.00</b>	<b>0.00</b>	<b>7.36</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.31</b>	<b>0.00</b>	<b>0.00</b>	<b>7.40</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Wiring Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
Pick-up Truck	1	Paved	0.5	60	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	6	Paved	58	60	0.003	0.001	1.16	0.28	0.03	0.01
<b>Offsite Total</b>							<b>1.16</b>	<b>0.28</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>1.16</b>	<b>0.29</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 43**  
**Modifications to Lugo Substation**  
**Control Room**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.79	2.66	6.43	0.01	0.23	0.21	1,089.8
Onsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.44</b>	<b>0.01</b>	<b>0.24</b>	<b>0.21</b>	<b>1092.6</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.84</b>	<b>3.83</b>	<b>6.56</b>	<b>0.01</b>	<b>1.03</b>	<b>0.41</b>	<b>1256.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.05	0.00	0.00	0.00	8.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.05	0.01	0.00	0.00	0.00	6.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>6.5</b>
<b>Total</b>	<b>0.01</b>	<b>0.07</b>	<b>0.05</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>14.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30 Ton Crane	350	1	15	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30 Ton Crane	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30 Ton Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
<b>Total</b>	<b>0.79</b>	<b>2.66</b>	<b>6.43</b>	<b>0.01</b>	<b>0.23</b>	<b>0.21</b>	<b>1079.64</b>	<b>0.07</b>	<b>0.03</b>	<b>1089.84</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 43**  
**Modifications to Lugo Substation**  
**Control Room**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30 Ton Crane	0.01	0.02	0.05	0.00	0.00	0.00	8.10	0.00	0.00	8.2
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.10</b>	<b>0.00</b>	<b>0.00</b>	<b>8.17</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	80	N/A	0.5
Stake Truck	1	80	N/A	0.5
Wiring Truck	1	80	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Stake Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Wiring Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.59
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.72</b>	<b>0.00</b>	<b>0.00</b>	<b>2.75</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.14</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>164.44</b>	<b>0.01</b>	<b>0.01</b>	<b>166.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

**Table 43**  
**Modifications to Lugo Substation**  
**Control Room**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Stake Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Wiring Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>	<b>0.00</b>	<b>0.00</b>	<b>0.11</b>
<b>Offsite</b>										
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.47	0.00	0.00	6.54
<b>Offsite Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.47</b>	<b>0.00</b>	<b>0.00</b>	<b>6.54</b>
<b>Total</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.58</b>	<b>0.00</b>	<b>0.00</b>	<b>6.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
Stake Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
Wiring Truck	1	Paved	0.5	80	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	80	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>0.78</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 44  
Modifications to Lugo Substation  
Maintenance**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	1.1
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>1.1</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>164.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 44**  
**Modifications to Lugo Substation**  
**Maintenance**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Foreman Truck	1	40	N/A	0.5
Crew Truck	2	40	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	40	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Foreman Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.12</b>	<b>0.00</b>	<b>0.00</b>	<b>1.14</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.84</b>	<b>0.01</b>	<b>0.01</b>	<b>164.70</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Foreman Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01

**Table 44**  
**Modifications to Lugo Substation**  
**Maintenance**

Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>
<b>Offsite</b>										
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>	<b>0.00</b>	<b>0.00</b>	<b>3.27</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.26</b>	<b>0.00</b>	<b>0.00</b>	<b>3.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Foreman Truck	1	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
Crew Truck	2	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	40	0.003	0.001	0.77	0.19	0.02	0.00
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>0.78</b>	<b>0.19</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 45**  
**Modifications to Lugo Substation**  
**Transformer Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.67	7.42	13.25	0.02	0.61	0.56	1,987.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.01	0.00	0.00	0.00	2.5
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.67</b>	<b>7.42</b>	<b>13.26</b>	<b>0.02</b>	<b>0.61</b>	<b>0.56</b>	<b>1990.3</b>
Offsite Motor Vehicle Exhaust	0.06	1.75	0.19	0.00	0.04	0.00	245.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.16	0.28	
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>1.19</b>	<b>0.29</b>	<b>245.3</b>
<b>Total</b>	<b>1.74</b>	<b>9.17</b>	<b>13.45</b>	<b>0.03</b>	<b>1.81</b>	<b>0.85</b>	<b>2235.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.08	0.37	0.59	0.00	0.03	0.03	88.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.08</b>	<b>0.37</b>	<b>0.59</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>88.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.10	0.01	0.00	0.00	0.00	14.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>14.7</b>
<b>Total</b>	<b>0.08</b>	<b>0.48</b>	<b>0.60</b>	<b>0.00</b>	<b>0.10</b>	<b>0.04</b>	<b>103.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Forklift	100	2	120	10
50 Ton Crane	200	2	75	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Forklift	100	0.031	0.213	0.211	0.000	0.015	0.014	31.197	0.003	0.001	Forklifts
50 Ton Crane	200	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 45**  
**Modifications to Lugo Substation**  
**Transformer Assembly**

Forklift	0.62	4.26	4.22	0.01	0.30	0.27	623.94	0.06	0.02	630.2
50 Ton Crane	1.05	3.16	9.03	0.02	0.31	0.29	1344.70	0.09	0.03	1,357.5
<b>Total</b>	<b>1.67</b>	<b>7.42</b>	<b>13.25</b>	<b>0.02</b>	<b>0.61</b>	<b>0.56</b>	<b>1968.64</b>	<b>0.15</b>	<b>0.05</b>	<b>1987.71</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Forklift	0.04	0.26	0.25	0.00	0.02	0.02	37.44	0.00	0.00	37.8
50 Ton Crane	0.04	0.12	0.34	0.00	0.01	0.01	50.43	0.00	0.00	50.9
<b>Total</b>	<b>0.08</b>	<b>0.37</b>	<b>0.59</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>87.86</b>	<b>0.01</b>	<b>0.00</b>	<b>88.72</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Carry-all Truck	1	120	N/A	0.5
Crew Truck	2	120	N/A	0.5
<b>Offsite</b>				
Worker Commute	6	120	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Carry-all Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.52</b>	<b>0.00</b>	<b>0.00</b>	<b>2.55</b>

**Table 45  
Modifications to Lugo Substation  
Transformer Assembly**

<b>Offsite</b>										
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.19</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>242.58</b>	<b>0.01</b>	<b>0.01</b>	<b>245.34</b>
<b>Total</b>	<b>0.06</b>	<b>1.75</b>	<b>0.20</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>245.09</b>	<b>0.01</b>	<b>0.01</b>	<b>247.89</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Carry-all Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.05
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.15</b>	<b>0.00</b>	<b>0.00</b>	<b>0.15</b>
<b>Offsite</b>										
Worker Commute	0.00	0.10	0.01	0.00	0.00	0.00	14.55	0.00	0.00	14.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.55</b>	<b>0.00</b>	<b>0.00</b>	<b>14.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.71</b>	<b>0.00</b>	<b>0.00</b>	<b>14.87</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Carry-all Truck	1	Paved	0.5	120	0.003	0.001	0.00	0.00	0.00	0.00
Crew Truck	2	Paved	0.5	120	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	6	Paved	58	120	0.003	0.001	1.16	0.28	0.07	0.02
<b>Offsite Total</b>							<b>1.16</b>	<b>0.28</b>	<b>0.07</b>	<b>0.02</b>
<b>Total</b>							<b>1.16</b>	<b>0.29</b>	<b>0.07</b>	<b>0.02</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 45**  
**Modifications to Lugo Substation**  
**Transformer Assembly**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 46  
Modifications to Lugo Substation  
Testing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.4</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.04	0.00	0.00	0.00	0.00	5.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.03	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>5.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Cranes

<sup>a</sup> From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**



**Table 46  
Modifications to Lugo Substation  
Testing**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Crew Truck	1	70	N/A	0.5
<b>Offsite</b>				
Worker Commute	4	70	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Crew Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.37</b>	<b>0.00</b>	<b>0.00</b>	<b>0.38</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>162.09</b>	<b>0.01</b>	<b>0.01</b>	<b>163.94</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Crew Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.66	0.00	0.00	5.72

**Table 46  
Modifications to Lugo Substation  
Testing**

<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.66</b>	<b>0.00</b>	<b>0.00</b>	<b>5.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.67</b>	<b>0.00</b>	<b>0.00</b>	<b>5.74</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Crew Truck	1	Paved	0.5	70	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	70	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>
<b>Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.03</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 47  
Modifications to Lugo Substation  
Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.2
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.2</b>
Offsite Motor Vehicle Exhaust	0.02	0.58	0.06	0.00	0.01	0.00	81.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.39	0.09	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>81.8</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.40</b>	<b>0.10</b>	<b>83.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 47**  
**Modifications to Lugo Substation**  
**Survey**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
Survey Truck	2	15	N/A	0.5
<b>Offsite</b>				
Worker Commute	2	15	N/A	58

<sup>a</sup> Asphalt delivery trucks based on 4,765 CY over 30 days and 7.3 CY/truck

Aggregate base delivery trucks based on 7,800 CY over 30 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
Survey Truck	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
<b>Offsite</b>										
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.01	0.00	0.00	0.00	0.00	1.15	0.00	0.00	1.17
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.15</b>	<b>0.00</b>	<b>0.00</b>	<b>1.17</b>
<b>Offsite</b>										
Worker Commute	0.02	0.58	0.06	0.00	0.01	0.00	80.86	0.00	0.00	81.78
<b>Offsite Total</b>	<b>0.02</b>	<b>0.58</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>80.86</b>	<b>0.00</b>	<b>0.00</b>	<b>81.78</b>
<b>Total</b>	<b>0.02</b>	<b>0.59</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>82.01</b>	<b>0.01</b>	<b>0.00</b>	<b>82.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 47**  
**Modifications to Lugo Substation**  
**Survey**

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
Survey Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>
<b>Offsite</b>										
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>	<b>0.00</b>	<b>0.00</b>	<b>0.61</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.62</b>	<b>0.00</b>	<b>0.00</b>	<b>0.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
Survey Truck	2	Paved	0.5	15	0.003	0.001	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Worker Commute	2	Paved	58	15	0.003	0.001	0.39	0.09	0.00	0.00
<b>Offsite Total</b>							<b>0.39</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>							<b>0.39</b>	<b>0.10</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

**Table 47**  
**Modifications to Lugo Substation**  
**Survey**

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 48**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Survey**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.23	6.42	0.76	0.01	0.12	0.00	916.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	192.07	19.70	
<b>Offsite Total</b>	<b>0.23</b>	<b>6.42</b>	<b>0.76</b>	<b>0.01</b>	<b>192.19</b>	<b>19.70</b>	<b>916.5</b>
<b>Total</b>	<b>0.23</b>	<b>6.42</b>	<b>0.76</b>	<b>0.01</b>	<b>192.19</b>	<b>19.70</b>	<b>916.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.01	0.16	0.02	0.00	0.00	0.00	22.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	4.80	0.49	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.00</b>	<b>4.80</b>	<b>0.49</b>	<b>22.9</b>
<b>Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.00</b>	<b>4.80</b>	<b>0.49</b>	<b>22.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 48  
Alternative Transmission and Subtransmission Construction Emissions with Segment 9  
Survey**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	8	50	N/A	28
Worker Commute	16	50	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	MDV Gas	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.06	1.76	0.26	0.00	0.02	0.00	258.61	0.02	0.01	262.24
Worker Commute	0.16	4.66	0.51	0.01	0.10	0.00	646.87	0.04	0.02	654.25
<b>Offsite Total</b>	<b>0.23</b>	<b>6.42</b>	<b>0.76</b>	<b>0.01</b>	<b>0.12</b>	<b>0.00</b>	<b>905.48</b>	<b>0.06</b>	<b>0.03</b>	<b>916.49</b>
<b>Total</b>	<b>0.23</b>	<b>6.42</b>	<b>0.76</b>	<b>0.01</b>	<b>0.12</b>	<b>0.00</b>	<b>905.48</b>	<b>0.06</b>	<b>0.03</b>	<b>916.49</b>



**Table 48**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Survey**

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	6.47	0.00	0.00	6.56
Worker Commute	0.00	0.12	0.01	0.00	0.00	0.00	16.17	0.00	0.00	16.36
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.64</b>	<b>0.00</b>	<b>0.00</b>	<b>22.91</b>
<b>Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>22.64</b>	<b>0.00</b>	<b>0.00</b>	<b>22.91</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	8	Unpaved	18	50	1.311	0.131	188.71	18.87	4.72	0.47
1-Ton Truck, 4x4	8	Paved	10	50	0.003	0.001	0.27	0.07	0.01	0.00
Worker Commute	16	Paved	58	50	0.003	0.001	3.09	0.76	0.08	0.02
<b>Offsite Total</b>							<b>192.07</b>	<b>19.70</b>	<b>4.80</b>	<b>0.49</b>
<b>Total</b>							<b>192.07</b>	<b>19.70</b>	<b>4.80</b>	<b>0.49</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00

**Table 48**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Survey**

Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 49**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Construction and Materials Yards**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.91	3.00	7.11	0.01	0.25	0.23	1,297.0
Onsite Motor Vehicle Exhaust	0.04	0.33	1.46	0.00	0.05	0.03	324.8
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.32	0.08	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.95</b>	<b>3.33</b>	<b>8.57</b>	<b>0.02</b>	<b>0.62</b>	<b>0.34</b>	<b>1621.8</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	163.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.77	0.19	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.80</b>	<b>0.19</b>	<b>163.6</b>
<b>Total/Yard</b>	<b>0.99</b>	<b>4.49</b>	<b>8.70</b>	<b>0.02</b>	<b>1.42</b>	<b>0.53</b>	<b>1785.4</b>
<b>Total for 8 Yards</b>	<b>7.89</b>	<b>35.93</b>	<b>69.59</b>	<b>0.15</b>	<b>11.37</b>	<b>4.22</b>	<b>14283.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.41	1.37	3.25	0.01	0.11	0.11	592.1
Onsite Motor Vehicle Exhaust	0.02	0.15	0.67	0.00	0.02	0.01	148.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.15	0.04	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.43</b>	<b>1.52</b>	<b>3.91</b>	<b>0.01</b>	<b>0.29</b>	<b>0.15</b>	<b>740.4</b>
Offsite Motor Vehicle Exhaust	0.02	0.53	0.06	0.00	0.01	0.00	74.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.35	0.09	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.53</b>	<b>0.06</b>	<b>0.00</b>	<b>0.36</b>	<b>0.09</b>	<b>74.7</b>
<b>Total/Yard</b>	<b>0.45</b>	<b>2.05</b>	<b>3.97</b>	<b>0.01</b>	<b>0.65</b>	<b>0.24</b>	<b>815.0</b>
<b>Total for 8 Yards</b>	<b>3.60</b>	<b>16.40</b>	<b>31.77</b>	<b>0.07</b>	<b>5.19</b>	<b>1.93</b>	<b>6520.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
R/T Forklift	200	1	913	5
Boom/Crane Truck	350	1	913	5

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
R/T Forklift	200	0.049	0.157	0.351	0.001	0.012	0.011	77.053	0.004	0.002	Forklifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

**Table 49**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Construction and Materials Yards**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
R/T Forklift	0.24	0.78	1.76	0.00	0.06	0.05	385.26	0.02	0.01	388.8
Boom/Crane Truck	0.66	2.21	5.36	0.01	0.19	0.18	899.70	0.06	0.02	908.2
<b>Total</b>	<b>0.91</b>	<b>3.00</b>	<b>7.11</b>	<b>0.01</b>	<b>0.25</b>	<b>0.23</b>	<b>1284.96</b>	<b>0.08</b>	<b>0.03</b>	<b>1297.03</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
R/T Forklift	0.11	0.36	0.80	0.00	0.03	0.02	175.87	0.01	0.00	177.5
Boom/Crane Truck	0.30	1.01	2.44	0.00	0.09	0.08	410.71	0.03	0.01	414.6
<b>Total</b>	<b>0.41</b>	<b>1.37</b>	<b>3.25</b>	<b>0.01</b>	<b>0.11</b>	<b>0.11</b>	<b>586.58</b>	<b>0.04</b>	<b>0.02</b>	<b>592.09</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh. <sup>a</sup>
<b>Onsite</b>				
1-Ton Truck, 4x4	1	913	4	10
Boom/Crane Truck	1	913	5	12.5
Water Truck	2	913	10	25
Jet A Fuel Truck	1	913	4	10
Truck, Semi Tractor	1	913	6	15
<b>Offsite</b>				
Worker Commute	4	913	N/A	58

<sup>a</sup> Onsite travel based on 25% use at 10 mph average speed

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Jet A Fuel Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Truck, Semi Tractor	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
<b>Offsite</b>										

**Table 49**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Construction and Materials Yards**

Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05
----------------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
1-Ton Truck, 4x4	0.00	0.08	0.01	0.00	0.00	0.00	11.55	0.00	0.00	11.71
Boom/Crane Truck	0.01	0.04	0.21	0.00	0.01	0.00	44.25	0.00	0.00	44.73
Water Truck	0.02	0.14	0.83	0.00	0.03	0.02	177.01	0.00	0.01	178.90
Jet A Fuel Truck	0.00	0.03	0.17	0.00	0.01	0.00	35.40	0.00	0.00	35.78
Truck, Semi Tractor	0.01	0.04	0.25	0.00	0.01	0.00	53.10	0.00	0.00	53.67
<b>Onsite Total</b>	<b>0.04</b>	<b>0.33</b>	<b>1.46</b>	<b>0.00</b>	<b>0.05</b>	<b>0.03</b>	<b>321.32</b>	<b>0.00</b>	<b>0.01</b>	<b>324.79</b>
<b>Offsite</b>										
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>161.72</b>	<b>0.01</b>	<b>0.01</b>	<b>163.56</b>
<b>Total</b>	<b>0.08</b>	<b>1.49</b>	<b>1.59</b>	<b>0.01</b>	<b>0.07</b>	<b>0.03</b>	<b>483.03</b>	<b>0.01</b>	<b>0.02</b>	<b>488.35</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
1-Ton Truck, 4x4	0.00	0.04	0.01	0.00	0.00	0.00	5.27	0.00	0.00	5.34
Boom/Crane Truck	0.00	0.02	0.09	0.00	0.00	0.00	20.20	0.00	0.00	20.42
Water Truck	0.01	0.06	0.38	0.00	0.01	0.01	80.81	0.00	0.00	81.67
Jet A Fuel Truck	0.00	0.01	0.08	0.00	0.00	0.00	16.16	0.00	0.00	16.33
Truck, Semi Tractor	0.00	0.02	0.11	0.00	0.00	0.00	24.24	0.00	0.00	24.50
<b>Onsite Total</b>	<b>0.02</b>	<b>0.15</b>	<b>0.67</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>146.68</b>	<b>0.00</b>	<b>0.01</b>	<b>148.27</b>
<b>Offsite</b>										
Worker Commute	0.02	0.53	0.06	0.00	0.01	0.00	73.82	0.00	0.00	74.67
<b>Offsite Total</b>	<b>0.02</b>	<b>0.53</b>	<b>0.06</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>73.82</b>	<b>0.00</b>	<b>0.00</b>	<b>74.67</b>
<b>Total</b>	<b>0.04</b>	<b>0.68</b>	<b>0.72</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>220.51</b>	<b>0.01</b>	<b>0.01</b>	<b>222.93</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
---------	--------	-----------	---------------------------	-----------	--	---	--	---	--	---

**Table 49**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Construction and Materials Yards**

<b>Onsite</b>										
1-Ton Truck, 4x4	1	Paved	10	913	0.003	0.001	0.03	0.01	0.02	0.00
Boom/Crane Truck	1	Paved	12.5	913	0.003	0.001	0.04	0.01	0.02	0.00
Water Truck	2	Paved	25	913	0.003	0.001	0.17	0.04	0.08	0.02
Jet A Fuel Truck	1	Paved	10	913	0.003	0.001	0.03	0.01	0.02	0.00
Truck, Semi Tractor	1	Paved	15	913	0.003	0.001	0.05	0.01	0.02	0.01
<b>Onsite Total</b>							<b>0.32</b>	<b>0.08</b>	<b>0.15</b>	<b>0.04</b>
<b>Offsite</b>										
Worker Commute	4	Paved	58	913	0.003	0.001	0.77	0.19	0.35	0.09
<b>Offsite Total</b>							<b>0.77</b>	<b>0.19</b>	<b>0.35</b>	<b>0.09</b>
<b>Total</b>							<b>1.10</b>	<b>0.27</b>	<b>0.50</b>	<b>0.12</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 50**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Right-of-Way Clearing**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	12.06	42.79	92.13	0.18	3.38	3.11	17,652.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	4829.36	1599.74	
<b>Onsite Total</b>	<b>12.06</b>	<b>42.79</b>	<b>92.13</b>	<b>0.18</b>	<b>4832.74</b>	<b>1602.85</b>	<b>17652.9</b>
Offsite Motor Vehicle Exhaust	0.60	15.71	4.52	0.03	0.40	0.06	2,754.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	333.03	34.75	
<b>Offsite Total</b>	<b>0.60</b>	<b>15.71</b>	<b>4.52</b>	<b>0.03</b>	<b>333.43</b>	<b>34.81</b>	<b>2754.7</b>
<b>Total</b>	<b>12.66</b>	<b>58.50</b>	<b>96.64</b>	<b>0.21</b>	<b>5166.17</b>	<b>1637.66</b>	<b>20407.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.63	2.25	4.84	0.01	0.18	0.16	926.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	253.54	83.99	
<b>Onsite Total</b>	<b>0.63</b>	<b>2.25</b>	<b>4.84</b>	<b>0.01</b>	<b>253.72</b>	<b>84.15</b>	<b>926.8</b>
Offsite Motor Vehicle Exhaust	0.03	0.82	0.24	0.00	0.02	0.00	144.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	17.48	1.82	
<b>Offsite Total</b>	<b>0.03</b>	<b>0.82</b>	<b>0.24</b>	<b>0.00</b>	<b>17.51</b>	<b>1.83</b>	<b>144.6</b>
<b>Total</b>	<b>0.66</b>	<b>3.07</b>	<b>5.07</b>	<b>0.01</b>	<b>271.22</b>	<b>85.98</b>	<b>1071.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	350	3	105	7
Track Type Dozer	350	3	105	7
Road Grader	350	3	105	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	350	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes
Track Type Dozer	350	0.218	0.790	1.742	0.003	0.067	0.061	258.997	0.020	0.007	Crawler Tractors
Road Grader	350	0.158	0.552	1.238	0.002	0.045	0.041	229.278	0.014	0.006	Graders

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	4.16	14.61	29.56	0.08	1.04	0.96	7235.42	0.38	0.19	7,301.5
Track Type Dozer	4.58	16.59	36.58	0.05	1.40	1.29	5438.93	0.41	0.14	5,491.5
Road Grader	3.31	11.59	25.99	0.05	0.94	0.86	4814.84	0.30	0.13	4,859.9

**Table 50**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Right-of-Way Clearing**

<b>Total</b>	<b>12.06</b>	<b>42.79</b>	<b>92.13</b>	<b>0.18</b>	<b>3.38</b>	<b>3.11</b>	<b>17489.19</b>	<b>1.09</b>	<b>0.45</b>	<b>17652.89</b>
--------------	--------------	--------------	--------------	-------------	-------------	-------------	-----------------	-------------	-------------	-----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.22	0.77	1.55	0.00	0.05	0.05	379.86	0.02	0.01	383.3
Track Type Dozer	0.24	0.87	1.92	0.00	0.07	0.07	285.54	0.02	0.01	288.3
Road Grader	0.17	0.61	1.36	0.00	0.05	0.05	252.78	0.02	0.01	255.1
<b>Total</b>	<b>0.63</b>	<b>2.25</b>	<b>4.84</b>	<b>0.01</b>	<b>0.18</b>	<b>0.16</b>	<b>918.18</b>	<b>0.06</b>	<b>0.02</b>	<b>926.78</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	3	105	N/A	28
Water Truck	6	105	N/A	28
Lowboy Truck/Trailer	3	105	N/A	1
Worker Commute	50	105	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	HHDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.02	0.66	0.10	0.00	0.01	0.00	96.98	0.01	0.00	98.34
Water Truck	0.07	0.48	2.78	0.01	0.09	0.05	594.76	0.00	0.02	601.12



**Table 50**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Right-of-Way Clearing**

Lowboy Truck/Trailer	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.51	14.57	1.59	0.02	0.30	0.01	2021.47	0.12	0.07	2044.54
<b>Offsite Total</b>	<b>0.60</b>	<b>15.71</b>	<b>4.52</b>	<b>0.03</b>	<b>0.40</b>	<b>0.06</b>	<b>2723.83</b>	<b>0.13</b>	<b>0.09</b>	<b>2754.73</b>
<b>Total</b>	<b>0.60</b>	<b>15.71</b>	<b>4.52</b>	<b>0.03</b>	<b>0.40</b>	<b>0.06</b>	<b>2723.83</b>	<b>0.13</b>	<b>0.09</b>	<b>2754.73</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.03	0.01	0.00	0.00	0.00	5.09	0.00	0.00	5.16
Water Truck	0.00	0.03	0.15	0.00	0.00	0.00	31.23	0.00	0.00	31.56
Lowboy Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.56
Worker Commute	0.03	0.76	0.08	0.00	0.02	0.00	106.13	0.01	0.00	107.34
<b>Offsite Total</b>	<b>0.03</b>	<b>0.82</b>	<b>0.24</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>143.00</b>	<b>0.01</b>	<b>0.00</b>	<b>144.62</b>
<b>Total</b>	<b>0.03</b>	<b>0.82</b>	<b>0.24</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>143.00</b>	<b>0.01</b>	<b>0.00</b>	<b>144.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	3	Unpaved	18	105	1.311	0.131	70.77	7.08	3.72	0.37
1-Ton Truck, 4x4	3	Paved	10	105	0.003	0.001	0.10	0.02	0.01	0.00
Water Truck	6	Unpaved	18	105	2.273	0.227	245.49	24.55	12.89	1.29
Water Truck	6	Paved	10	105	0.003	0.001	0.20	0.05	0.01	0.00
Lowboy Truck/Trailer	3	Unpaved	1	105	2.273	0.227	6.82	0.68	0.36	0.04
Worker Commute	50	Paved	58	105	0.003	0.001	9.66	2.37	0.51	0.12
<b>Offsite Total</b>							<b>333.03</b>	<b>34.75</b>	<b>17.48</b>	<b>1.82</b>
<b>Total</b>							<b>333.03</b>	<b>34.75</b>	<b>17.48</b>	<b>1.82</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 50**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Right-of-Way Clearing**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr	42	4410	114.985	38.089	4829.36	1599.74	253.54	83.99
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>4829.36</b>	<b>1599.74</b>	<b>253.54</b>	<b>83.99</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 51  
Alternative Transmission and Subtransmission Construction Emissions with Segment 9  
Roads and Landing Work**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	21.08	73.13	161.45	0.32	5.84	5.37	31,372.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	5665.93	1850.48	
<b>Onsite Total</b>	<b>21.08</b>	<b>73.13</b>	<b>161.45</b>	<b>0.32</b>	<b>5671.77</b>	<b>1855.85</b>	<b>31372.7</b>
Offsite Motor Vehicle Exhaust	0.40	9.40	4.79	0.02	0.29	0.08	2,059.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	530.29	53.78	
<b>Offsite Total</b>	<b>0.40</b>	<b>9.40</b>	<b>4.79</b>	<b>0.02</b>	<b>530.58</b>	<b>53.86</b>	<b>2059.4</b>
<b>Total</b>	<b>21.48</b>	<b>82.53</b>	<b>166.25</b>	<b>0.35</b>	<b>6202.35</b>	<b>1909.71</b>	<b>33432.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	1.46	5.08	11.25	0.02	0.41	0.37	2,155.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	424.94	138.79	
<b>Onsite Total</b>	<b>1.46</b>	<b>5.08</b>	<b>11.25</b>	<b>0.02</b>	<b>425.35</b>	<b>139.16</b>	<b>2155.0</b>
Offsite Motor Vehicle Exhaust	0.03	0.70	0.36	0.00	0.02	0.01	154.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	39.50	4.01	
<b>Offsite Total</b>	<b>0.03</b>	<b>0.70</b>	<b>0.36</b>	<b>0.00</b>	<b>39.52</b>	<b>4.01</b>	<b>154.0</b>
<b>Total</b>	<b>1.49</b>	<b>5.78</b>	<b>11.61</b>	<b>0.02</b>	<b>464.87</b>	<b>143.17</b>	<b>2309.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	350	4	150	7
Track Type Dozer	350	4	150	7
Road Grader	350	4	150	5
Drum Type Compactor	250	4	150	5
Excavator	300	4	90	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	350	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes
Track Type Dozer	350	0.218	0.790	1.742	0.003	0.067	0.061	258.997	0.020	0.007	Crawler Tractors
Road Grader	350	0.158	0.552	1.238	0.002	0.045	0.041	229.278	0.014	0.006	Graders
Drum Type Compactor	250	0.104	0.346	0.995	0.002	0.033	0.031	152.952	0.009	0.004	Rollers
Excavator	300	0.149	0.485	1.022	0.002	0.037	0.034	233.525	0.013	0.006	Excavators

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

**Table 51**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Roads and Landing Work**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	5.55	19.48	39.41	0.11	1.39	1.28	9647.23	0.50	0.25	9,735.4
Track Type Dozer	6.11	22.11	48.77	0.07	1.87	1.72	7251.90	0.55	0.19	7,322.0
Road Grader	3.15	11.04	24.76	0.05	0.89	0.82	4585.56	0.28	0.12	4,628.5
Drum Type Compactor	2.08	6.92	19.89	0.03	0.67	0.61	3059.05	0.19	0.08	3,087.6
Excavator	4.18	13.57	28.63	0.06	1.02	0.94	6538.71	0.38	0.17	6,599.3
<b>Total</b>	<b>21.08</b>	<b>73.13</b>	<b>161.45</b>	<b>0.32</b>	<b>5.84</b>	<b>5.37</b>	<b>31082.46</b>	<b>1.90</b>	<b>0.81</b>	<b>31372.69</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.42	1.46	2.96	0.01	0.10	0.10	723.54	0.04	0.02	730.2
Track Type Dozer	0.46	1.66	3.66	0.01	0.14	0.13	543.89	0.04	0.01	549.1
Road Grader	0.24	0.83	1.86	0.00	0.07	0.06	343.92	0.02	0.01	347.1
Drum Type Compactor	0.16	0.52	1.49	0.00	0.05	0.05	229.43	0.01	0.01	231.6
Excavator	0.19	0.61	1.29	0.00	0.05	0.04	294.24	0.02	0.01	297.0
<b>Total</b>	<b>1.46</b>	<b>5.08</b>	<b>11.25</b>	<b>0.02</b>	<b>0.41</b>	<b>0.37</b>	<b>2135.02</b>	<b>0.13</b>	<b>0.06</b>	<b>2154.97</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	8	150	N/A	28
Water Truck	8	150	N/A	28
Lowboy Truck/Trailer	4	90	N/A	1
Worker Commute	24	150	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	HHDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Table 51**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Roads and Landing Work**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.06	1.76	0.26	0.00	0.02	0.00	258.61	0.02	0.01	262.24
Water Truck	0.09	0.64	3.71	0.01	0.12	0.07	793.02	0.00	0.03	801.49
Lowboy Truck/Trailer	0.00	0.01	0.07	0.00	0.00	0.00	14.16	0.00	0.00	14.31
Worker Commute	0.24	6.99	0.76	0.01	0.14	0.01	970.30	0.06	0.03	981.38
<b>Offsite Total</b>	<b>0.40</b>	<b>9.40</b>	<b>4.79</b>	<b>0.02</b>	<b>0.29</b>	<b>0.08</b>	<b>2036.09</b>	<b>0.08</b>	<b>0.07</b>	<b>2059.42</b>
<b>Total</b>	<b>0.40</b>	<b>9.40</b>	<b>4.79</b>	<b>0.02</b>	<b>0.29</b>	<b>0.08</b>	<b>2036.09</b>	<b>0.08</b>	<b>0.07</b>	<b>2059.42</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.13	0.02	0.00	0.00	0.00	19.40	0.00	0.00	19.67
Water Truck	0.01	0.05	0.28	0.00	0.01	0.01	59.48	0.00	0.00	60.11
Lowboy Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Worker Commute	0.02	0.52	0.06	0.00	0.01	0.00	72.77	0.00	0.00	73.60
<b>Offsite Total</b>	<b>0.03</b>	<b>0.70</b>	<b>0.36</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>152.28</b>	<b>0.01</b>	<b>0.01</b>	<b>154.03</b>
<b>Total</b>	<b>0.03</b>	<b>0.70</b>	<b>0.36</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>152.28</b>	<b>0.01</b>	<b>0.01</b>	<b>154.03</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	8	Unpaved	18	150	1.311	0.131	188.71	18.87	14.15	1.42
1-Ton Truck, 4x4	8	Paved	10	150	0.003	0.001	0.27	0.07	0.02	0.00
Water Truck	8	Unpaved	18	150	2.273	0.227	327.32	32.73	24.55	2.45
Water Truck	8	Paved	10	150	0.003	0.001	0.27	0.07	0.02	0.00
Lowboy Truck/Trailer	4	Unpaved	1	90	2.273	0.227	9.09	0.91	0.41	0.04
Worker Commute	24	Paved	58	150	0.003	0.001	4.63	1.14	0.35	0.09

**Table 51  
Alternative Transmission and Subtransmission Construction Emissions with Segment 9  
Roads and Landing Work**

<b>Offsite Total</b>							<b>530.29</b>	<b>53.78</b>	<b>39.50</b>	<b>4.01</b>
<b>Total</b>							<b>530.29</b>	<b>53.78</b>	<b>39.50</b>	<b>4.01</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling <sup>d</sup>	CY	2207	331056	6.65E-02	1.01E-02	146.66	22.21	11.00	1.67
Bulldozing, Scraping and Grading	hr	48	7200	114.985	38.089	5519.27	1828.27	413.95	137.12
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>5665.93</b>	<b>1850.48</b>	<b>424.94</b>	<b>138.79</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Based on excavating or backfilling and grading 18 ft. wide x 62.7 miles long x 1.5 ft. deep = 331,056 CY over 150 days

**Table 52**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Retaining Wall Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	6.07	27.28	46.47	0.11	1.75	1.61	9,979.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>6.07</b>	<b>27.28</b>	<b>46.47</b>	<b>0.11</b>	<b>1.75</b>	<b>1.61</b>	<b>9979.3</b>
Offsite Motor Vehicle Exhaust	0.46	6.12	13.17	0.03	0.49	0.23	3,304.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	751.26	75.70	
<b>Offsite Total</b>	<b>0.46</b>	<b>6.12</b>	<b>13.17</b>	<b>0.03</b>	<b>751.75</b>	<b>75.94</b>	<b>3304.2</b>
<b>Total</b>	<b>6.53</b>	<b>33.40</b>	<b>59.63</b>	<b>0.14</b>	<b>753.50</b>	<b>77.55</b>	<b>13283.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	2.25	10.13	17.26	0.04	0.65	0.60	3,707.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.25</b>	<b>10.13</b>	<b>17.26</b>	<b>0.04</b>	<b>0.65</b>	<b>0.60</b>	<b>3707.3</b>
Offsite Motor Vehicle Exhaust	0.14	2.07	3.70	0.01	0.14	0.07	969.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	229.68	23.15	
<b>Offsite Total</b>	<b>0.14</b>	<b>2.07</b>	<b>3.70</b>	<b>0.01</b>	<b>229.82</b>	<b>23.22</b>	<b>969.3</b>
<b>Total</b>	<b>2.40</b>	<b>12.20</b>	<b>20.96</b>	<b>0.05</b>	<b>230.47</b>	<b>23.82</b>	<b>4676.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom Truck	350	2	743	8
Tracked Drill Rig	250	2	743	8
Rubber Tire Backhoe	125	2	743	8
Wheel Loader	250	2	743	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Tracked Drill Rig	250	0.063	0.342	0.388	0.002	0.011	0.010	187.933	0.006	0.005	Bore/Drill Rigs
Rubber Tire Backhoe	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Wheel Loader	250	0.106	0.335	0.888	0.002	0.030	0.028	148.843	0.010	0.004	Rubber Tired Loaders

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom Truck	2.12	7.08	17.14	0.03	0.62	0.57	2879.03	0.19	0.07	2,906.2

**Table 52**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Retaining Wall Installation**

Tracked Drill Rig	1.00	5.48	6.21	0.03	0.18	0.17	3006.93	0.09	0.08	3,033.0
Rubber Tire Backhoe	1.26	9.35	8.91	0.02	0.47	0.43	1620.73	0.11	0.04	1,636.2
Wheel Loader	1.69	5.37	14.21	0.03	0.48	0.44	2381.49	0.15	0.06	2,403.9
<b>Total</b>	<b>6.07</b>	<b>27.28</b>	<b>46.47</b>	<b>0.11</b>	<b>1.75</b>	<b>1.61</b>	<b>9888.18</b>	<b>0.55</b>	<b>0.26</b>	<b>9979.34</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom Truck	0.79	2.63	6.37	0.01	0.23	0.21	1069.56	0.07	0.03	1,079.7
Tracked Drill Rig	0.37	2.03	2.31	0.01	0.07	0.06	1117.07	0.03	0.03	1,126.8
Rubber Tire Backhoe	0.47	3.47	3.31	0.01	0.17	0.16	602.10	0.04	0.02	607.9
Wheel Loader	0.63	1.99	5.28	0.01	0.18	0.17	884.72	0.06	0.02	893.0
<b>Total</b>	<b>2.25</b>	<b>10.13</b>	<b>17.26</b>	<b>0.04</b>	<b>0.65</b>	<b>0.60</b>	<b>3673.46</b>	<b>0.20</b>	<b>0.10</b>	<b>3707.32</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	743	N/A	28
Boom Truck	2	743	N/A	28
Dump Truck	4	743	N/A	60
Water Truck	2	743	N/A	28
Concrete Redi-Mix Truck	6	342	N/A	60
Lowboy Truck/Trailer	2	743	N/A	28
Worker Commute	12	743	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	HHDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Redi-Mix Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113



**Table 52**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Retaining Wall Installation**

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.02	0.44	0.06	0.00	0.01	0.00	64.65	0.00	0.00	65.56
Boom Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Dump Truck	0.10	0.68	3.97	0.01	0.13	0.07	849.66	0.00	0.03	858.74
Water Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Concrete Redi-Mix Truck	0.15	1.03	5.96	0.01	0.20	0.11	1274.49	0.01	0.04	1288.11
Lowboy Truck/Trailer	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Worker Commute	0.12	3.50	0.38	0.01	0.07	0.00	485.15	0.03	0.02	490.69
<b>Offsite Total</b>	<b>0.46</b>	<b>6.12</b>	<b>13.17</b>	<b>0.03</b>	<b>0.49</b>	<b>0.23</b>	<b>3268.72</b>	<b>0.05</b>	<b>0.11</b>	<b>3304.22</b>
<b>Total</b>	<b>0.46</b>	<b>6.12</b>	<b>13.17</b>	<b>0.03</b>	<b>0.49</b>	<b>0.23</b>	<b>3268.72</b>	<b>0.05</b>	<b>0.11</b>	<b>3304.22</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.01	0.16	0.02	0.00	0.00	0.00	24.02	0.00	0.00	24.36
Boom Truck	0.01	0.06	0.34	0.00	0.01	0.01	73.65	0.00	0.00	74.44
Dump Truck	0.04	0.25	1.48	0.00	0.05	0.03	315.65	0.00	0.01	319.02
Water Truck	0.01	0.06	0.34	0.00	0.01	0.01	73.65	0.00	0.00	74.44
Concrete Redi-Mix Truck	0.03	0.18	1.02	0.00	0.03	0.02	217.94	0.00	0.01	220.27
Lowboy Truck/Trailer	0.01	0.06	0.34	0.00	0.01	0.01	73.65	0.00	0.00	74.44
Worker Commute	0.05	1.30	0.14	0.00	0.03	0.00	180.23	0.01	0.01	182.29
<b>Offsite Total</b>	<b>0.14</b>	<b>2.07</b>	<b>3.70</b>	<b>0.01</b>	<b>0.14</b>	<b>0.07</b>	<b>958.79</b>	<b>0.02</b>	<b>0.03</b>	<b>969.25</b>
<b>Total</b>	<b>0.14</b>	<b>2.07</b>	<b>3.70</b>	<b>0.01</b>	<b>0.14</b>	<b>0.07</b>	<b>958.79</b>	<b>0.02</b>	<b>0.03</b>	<b>969.25</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 52**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Retaining Wall Installation**

Offsite										
1-Ton Truck, 4x4	2	Unpaved	18	743	1.311	0.131	47.18	4.72	17.53	1.75
1-Ton Truck, 4x4	2	Paved	10	743	0.003	0.001	0.07	0.02	0.02	0.01
Boom Truck	2	Unpaved	18	743	2.273	0.227	81.83	8.18	30.40	3.04
Boom Truck	2	Paved	10	743	0.003	0.001	0.07	0.02	0.02	0.01
Dump Truck	4	Unpaved	18	743	2.273	0.227	163.66	16.37	60.80	6.08
Dump Truck	4	Paved	42	743	0.003	0.001	0.56	0.14	0.21	0.05
Water Truck	2	Unpaved	18	743	2.273	0.227	81.83	8.18	30.40	3.04
Water Truck	2	Paved	10	743	0.003	0.001	0.07	0.02		
Concrete Redi-Mix Truck	6	Unpaved	18	342	2.273	0.227	245.49	24.55	41.98	4.20
Concrete Redi-Mix Truck	6	Paved	42	342	0.003	0.001	0.84	0.21	0.14	0.04
Lowboy Truck/Trailer	2	Unpaved	28	743	2.273	0.227	127.29	12.73	47.29	4.73
Lowboy Truck/Trailer	2	Paved	10	743	0.003	0.001	0.07	0.02	0.02	0.01
Worker Commute	12	Paved	58	743	0.003	0.001	2.32	0.57	0.86	0.21
<b>Offsite Total</b>							<b>751.26</b>	<b>75.70</b>	<b>229.68</b>	<b>23.15</b>
<b>Total</b>							<b>751.26</b>	<b>75.70</b>	<b>229.68</b>	<b>23.15</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 53**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Wet Crossing Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	13.89	60.40	107.04	0.22	4.11	3.78	19,801.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>13.89</b>	<b>60.40</b>	<b>107.04</b>	<b>0.22</b>	<b>4.11</b>	<b>3.78</b>	<b>19801.1</b>
Offsite Motor Vehicle Exhaust	1.32	17.89	36.71	0.09	1.39	0.65	9,311.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1871.70	188.88	
<b>Offsite Total</b>	<b>1.32</b>	<b>17.89</b>	<b>36.71</b>	<b>0.09</b>	<b>1873.09</b>	<b>189.53</b>	<b>9311.5</b>
<b>Total</b>	<b>15.21</b>	<b>78.29</b>	<b>143.76</b>	<b>0.32</b>	<b>1877.20</b>	<b>193.31</b>	<b>29112.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	1.20	5.23	9.26	0.02	0.36	0.33	1,712.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.20</b>	<b>5.23</b>	<b>9.26</b>	<b>0.02</b>	<b>0.36</b>	<b>0.33</b>	<b>1712.8</b>
Offsite Motor Vehicle Exhaust	0.09	1.42	2.42	0.01	0.10	0.04	643.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	130.85	13.21	
<b>Offsite Total</b>	<b>0.09</b>	<b>1.42</b>	<b>2.42</b>	<b>0.01</b>	<b>130.94</b>	<b>13.26</b>	<b>643.1</b>
<b>Total</b>	<b>1.30</b>	<b>6.64</b>	<b>11.68</b>	<b>0.03</b>	<b>131.30</b>	<b>13.58</b>	<b>2355.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Tracked Excavator	250	6	173	8
Rubber Tire Backhoe	125	6	173	8
Wheel Loader	250	6	173	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Tracked Excavator	250	0.105	0.339	0.785	0.002	0.026	0.024	158.540	0.009	0.004	Excavators
Rubber Tire Backhoe	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Wheel Loader	250	0.106	0.335	0.888	0.002	0.030	0.028	148.843	0.010	0.004	Rubber Tired Loaders

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Tracked Excavator	5.05	16.25	37.68	0.09	1.26	1.16	7609.93	0.46	0.20	7,680.8
Rubber Tire Backhoe	3.78	28.05	26.72	0.05	1.40	1.29	4862.20	0.34	0.13	4,908.7
Wheel Loader	5.07	16.10	42.64	0.08	1.45	1.33	7144.46	0.46	0.19	7,211.6

**Table 53**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Wet Crossing Installation**

<b>Total</b>	<b>13.89</b>	<b>60.40</b>	<b>107.04</b>	<b>0.22</b>	<b>4.11</b>	<b>3.78</b>	<b>19616.60</b>	<b>1.25</b>	<b>0.51</b>	<b>19801.09</b>
--------------	--------------	--------------	---------------	-------------	-------------	-------------	-----------------	-------------	-------------	-----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Tracked Excavator	0.44	1.41	3.26	0.01	0.11	0.10	658.26	0.04	0.02	664.4
Rubber Tire Backhoe	0.33	2.43	2.31	0.00	0.12	0.11	420.58	0.03	0.01	424.6
Wheel Loader	0.44	1.39	3.69	0.01	0.13	0.12	618.00	0.04	0.02	623.8
<b>Total</b>	<b>1.20</b>	<b>5.23</b>	<b>9.26</b>	<b>0.02</b>	<b>0.36</b>	<b>0.33</b>	<b>1696.84</b>	<b>0.11</b>	<b>0.04</b>	<b>1712.79</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	6	173	N/A	28
Dump Truck	12	173	N/A	60
Water Truck	6	173	N/A	28
Concrete Redi-Mix Truck	18	89	N/A	60
Lowboy Truck/Trailer	6	173	N/A	28
Worker Commute	36	173	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	HHDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Redi-Mix Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 53**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Wet Crossing Installation**

Onsite Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Offsite</b>										
1-Ton Truck, 4x4	0.05	1.32	0.19	0.00	0.02	0.00	193.96	0.01	0.01	196.68
Dump Truck	0.30	2.05	11.92	0.03	0.39	0.22	2548.98	0.01	0.09	2576.22
Water Truck	0.07	0.48	2.78	0.01	0.09	0.05	594.76	0.00	0.02	601.12
Concrete Redi-Mix Truck	0.46	3.08	17.89	0.04	0.59	0.33	3823.47	0.02	0.13	3864.33
Lowboy Truck/Trailer	0.07	0.48	2.78	0.01	0.09	0.05	594.76	0.00	0.02	601.12
Worker Commute	0.37	10.49	1.14	0.02	0.22	0.01	1455.46	0.09	0.05	1472.07
<b>Offsite Total</b>	<b>1.32</b>	<b>17.89</b>	<b>36.71</b>	<b>0.09</b>	<b>1.39</b>	<b>0.65</b>	<b>9211.39</b>	<b>0.14</b>	<b>0.31</b>	<b>9311.53</b>
<b>Total</b>	<b>1.32</b>	<b>17.89</b>	<b>36.71</b>	<b>0.09</b>	<b>1.39</b>	<b>0.65</b>	<b>9211.39</b>	<b>0.14</b>	<b>0.31</b>	<b>9311.53</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.11	0.02	0.00	0.00	0.00	16.78	0.00	0.00	17.01
Dump Truck	0.03	0.18	1.03	0.00	0.03	0.02	220.49	0.00	0.01	222.84
Water Truck	0.01	0.04	0.24	0.00	0.01	0.00	51.45	0.00	0.00	52.00
Concrete Redi-Mix Truck	0.02	0.14	0.80	0.00	0.03	0.01	170.14	0.00	0.01	171.96
Lowboy Truck/Trailer	0.01	0.04	0.24	0.00	0.01	0.00	51.45	0.00	0.00	52.00
Worker Commute	0.03	0.91	0.10	0.00	0.02	0.00	125.90	0.01	0.00	127.33
<b>Offsite Total</b>	<b>0.09</b>	<b>1.42</b>	<b>2.42</b>	<b>0.01</b>	<b>0.10</b>	<b>0.04</b>	<b>636.20</b>	<b>0.01</b>	<b>0.02</b>	<b>643.15</b>
<b>Total</b>	<b>0.09</b>	<b>1.42</b>	<b>2.42</b>	<b>0.01</b>	<b>0.10</b>	<b>0.04</b>	<b>636.20</b>	<b>0.01</b>	<b>0.02</b>	<b>643.15</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	6	Unpaved	18	173	1.311	0.131	141.54	14.15	12.24	1.22
1-Ton Truck, 4x4	6	Paved	10	173	0.003	0.001	0.20	0.05	0.02	0.00
Dump Truck	12	Unpaved	18	173	2.273	0.227	490.98	49.10	42.47	4.25
Dump Truck	12	Paved	42	173	0.003	0.001	1.68	0.41	0.15	0.04
Water Truck	6	Unpaved	18	173	2.273	0.227	245.49	24.55	21.23	2.12
Water Truck	6	Paved	10	173	0.003	0.001	0.20	0.05		
Concrete Redi-Mix Truck	18	Unpaved	18	89	2.273	0.227	736.46	73.65	32.77	3.28

**Table 53**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Wet Crossing Installation**

Concrete Redi-Mix Truck	18	Paved	42	89	0.003	0.001	2.52	0.62	0.11	0.03
Lowboy Truck/Trailer	6	Unpaved	18	173	2.273	0.227	245.49	24.55	21.23	2.12
Lowboy Truck/Trailer	6	Paved	10	173	0.003	0.001	0.20	0.05	0.02	0.00
Worker Commute	36	Paved	58	173	0.003	0.001	6.95	1.71	0.60	0.15
<b>Offsite Total</b>							<b>1871.70</b>	<b>188.88</b>	<b>130.85</b>	<b>13.21</b>
<b>Total</b>							<b>1871.70</b>	<b>188.88</b>	<b>130.85</b>	<b>13.21</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 54**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Guard Structure Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	11.20	48.80	87.62	0.21	3.43	3.16	21,470.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>11.20</b>	<b>48.80</b>	<b>87.62</b>	<b>0.21</b>	<b>3.43</b>	<b>3.16</b>	<b>21470.2</b>
Offsite Motor Vehicle Exhaust	0.52	10.15	9.03	0.03	0.44	0.16	3,031.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	954.15	96.23	
<b>Offsite Total</b>	<b>0.52</b>	<b>10.15</b>	<b>9.03</b>	<b>0.03</b>	<b>954.60</b>	<b>96.39</b>	<b>3031.7</b>
<b>Total</b>	<b>11.72</b>	<b>58.95</b>	<b>96.65</b>	<b>0.24</b>	<b>958.03</b>	<b>99.54</b>	<b>24501.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.11	0.49	0.88	0.00	0.03	0.03	214.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.11</b>	<b>0.49</b>	<b>0.88</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>214.7</b>
Offsite Motor Vehicle Exhaust	0.01	0.10	0.09	0.00	0.00	0.00	30.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	9.54	0.96	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.10</b>	<b>0.09</b>	<b>0.00</b>	<b>9.55</b>	<b>0.96</b>	<b>30.3</b>
<b>Total</b>	<b>0.12</b>	<b>0.59</b>	<b>0.97</b>	<b>0.00</b>	<b>9.58</b>	<b>1.00</b>	<b>245.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	4	20	7
Manlift/Bucket Truck	350	4	20	5
Boom/Crane Truck	500	4	20	8
Auger Truck	500	4	20	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	500	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Auger Truck	500	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

**Table 54  
Alternative Transmission and Subtransmission Construction Emissions with Segment 9  
Guard Structure Installation**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.76	8.82	11.22	0.02	0.94	0.87	1313.43	0.16	0.03	1,327.4
Manlift/Bucket Truck	1.90	8.19	22.14	0.04	0.66	0.61	4253.30	0.17	0.11	4,291.1
Boom/Crane Truck	4.24	14.17	34.27	0.06	1.24	1.14	5758.07	0.38	0.15	5,812.5
Auger Truck	3.30	17.62	19.99	0.10	0.60	0.55	9952.93	0.30	0.26	10,039.1
<b>Total</b>	<b>11.20</b>	<b>48.80</b>	<b>87.62</b>	<b>0.21</b>	<b>3.43</b>	<b>3.16</b>	<b>21277.72</b>	<b>1.01</b>	<b>0.55</b>	<b>21470.16</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.02	0.09	0.11	0.00	0.01	0.01	13.13	0.00	0.00	13.3
Manlift/Bucket Truck	0.02	0.08	0.22	0.00	0.01	0.01	42.53	0.00	0.00	42.9
Boom/Crane Truck	0.04	0.14	0.34	0.00	0.01	0.01	57.58	0.00	0.00	58.1
Auger Truck	0.03	0.18	0.20	0.00	0.01	0.01	99.53	0.00	0.00	100.4
<b>Total</b>	<b>0.11</b>	<b>0.49</b>	<b>0.88</b>	<b>0.00</b>	<b>0.03</b>	<b>0.03</b>	<b>212.78</b>	<b>0.01</b>	<b>0.01</b>	<b>214.70</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	8	20	N/A	28
1-Ton Truck, 4x4	4	20	N/A	28
Manlift/Bucket Truck	4	20	N/A	28
Boom/Crane Truck	4	20	N/A	28
Water Truck	1	20	N/A	28
Auger Truck	4	20	N/A	28
Extendable Flat Bed Pole Truck	4	20	N/A	28
Worker Commute	24	20	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	HHDT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05



**Table 54**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Guard Structure Installation**

Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Extendable Flat Bed Pole Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.06	1.76	0.26	0.00	0.02	0.00	258.61	0.02	0.01	262.24
1-Ton Truck, 4x4	0.01	0.04	0.13	0.00	0.02	0.01	83.87	0.00	0.00	84.87
Manlift/Bucket Truck	0.05	0.32	1.85	0.00	0.06	0.03	396.51	0.00	0.01	400.74
Boom/Crane Truck	0.05	0.32	1.85	0.00	0.06	0.03	396.51	0.00	0.01	400.74
Water Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Auger Truck	0.05	0.32	1.85	0.00	0.06	0.03	396.51	0.00	0.01	400.74
Extendable Flat Bed Pole Truck	0.05	0.32	1.85	0.00	0.06	0.03	396.51	0.00	0.01	400.74
Worker Commute	0.24	6.99	0.76	0.01	0.14	0.01	970.30	0.06	0.03	981.38
<b>Offsite Total</b>	<b>0.52</b>	<b>10.15</b>	<b>9.03</b>	<b>0.03</b>	<b>0.44</b>	<b>0.16</b>	<b>2997.95</b>	<b>0.08</b>	<b>0.10</b>	<b>3031.65</b>
<b>Total</b>	<b>0.52</b>	<b>10.15</b>	<b>9.03</b>	<b>0.03</b>	<b>0.44</b>	<b>0.16</b>	<b>2997.95</b>	<b>0.08</b>	<b>0.10</b>	<b>3031.65</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	2.59	0.00	0.00	2.62
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.00	0.00	0.85
Manlift/Bucket Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.97	0.00	0.00	4.01
Boom/Crane Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.97	0.00	0.00	4.01
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	1.00
Auger Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.97	0.00	0.00	4.01
Extendable Flat Bed Pole Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.97	0.00	0.00	4.01
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.70	0.00	0.00	9.81
<b>Offsite Total</b>	<b>0.01</b>	<b>0.10</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>29.98</b>	<b>0.00</b>	<b>0.00</b>	<b>30.32</b>
<b>Total</b>	<b>0.01</b>	<b>0.10</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>29.98</b>	<b>0.00</b>	<b>0.00</b>	<b>30.32</b>

**Table 54**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Guard Structure Installation**

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	8	Unpaved	18	20	1.102	0.110	158.65	15.86	1.59	0.16
3/4-Ton Truck, 4x4	8	Paved	10	20	0.003	0.001	0.27	0.07	0.00	0.00
1-Ton Truck, 4x4	4	Unpaved	18	20	1.311	0.131	94.36	9.44	0.94	0.09
1-Ton Truck, 4x4	4	Paved	10	20	0.003	0.001	0.13	0.03	0.00	0.00
Manlift/Bucket Truck	4	Unpaved	18	20	2.273	0.227	163.66	16.37	1.64	0.16
Manlift/Bucket Truck	4	Paved	10	20	0.003	0.001	0.13	0.03	0.00	0.00
Boom/Crane Truck	4	Unpaved	18	20	2.273	0.227	163.66	16.37	1.64	0.16
Boom/Crane Truck	4	Paved	10	20	0.003	0.001	0.13	0.03	0.00	0.00
Water Truck	1	Unpaved	18	20	2.273	0.227	40.91	4.09	0.41	0.04
Water Truck	1	Paved	10	20	0.003	0.001	0.03	0.01	0.00	0.00
Auger Truck	4	Unpaved	18	20	2.273	0.227	163.66	16.37	1.64	0.16
Auger Truck	4	Paved	10	20	0.003	0.001	0.13	0.03	0.00	0.00
Extendable Flat Bed Pole Truck	4	Unpaved	18	20	2.273	0.227	163.66	16.37	1.64	0.16
Extendable Flat Bed Pole Truck	4	Paved	10	20	0.003	0.001	0.13	0.03	0.00	0.00
Worker Commute	24	Paved	58	20	0.003	0.001	4.63	1.14	0.05	0.01
<b>Offsite Total</b>							<b>954.15</b>	<b>96.23</b>	<b>9.54</b>	<b>0.96</b>
<b>Total</b>							<b>954.15</b>	<b>96.23</b>	<b>9.54</b>	<b>0.96</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

**Table 54**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Guard Structure Installation**

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 55**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Remove Existing Conductor & GW**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	17.16	68.78	170.35	0.34	5.38	4.95	35,167.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>17.16</b>	<b>68.78</b>	<b>170.35</b>	<b>0.34</b>	<b>5.38</b>	<b>4.95</b>	<b>35167.6</b>
Offsite Motor Vehicle Exhaust	0.95	18.83	16.07	0.06	0.84	0.28	5,550.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1522.72	154.05	
<b>Offsite Total</b>	<b>0.95</b>	<b>18.83</b>	<b>16.07</b>	<b>0.06</b>	<b>1523.57</b>	<b>154.33</b>	<b>5550.1</b>
<b>Total</b>	<b>18.11</b>	<b>87.62</b>	<b>186.42</b>	<b>0.40</b>	<b>1528.94</b>	<b>159.28</b>	<b>40717.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.23	0.94	2.36	0.00	0.07	0.07	480.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.23</b>	<b>0.94</b>	<b>2.36</b>	<b>0.00</b>	<b>0.07</b>	<b>0.07</b>	<b>480.9</b>
Offsite Motor Vehicle Exhaust	0.01	0.28	0.24	0.00	0.01	0.00	82.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	22.53	2.28	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.28</b>	<b>0.24</b>	<b>0.00</b>	<b>22.55</b>	<b>2.28</b>	<b>82.5</b>
<b>Total</b>	<b>0.25</b>	<b>1.22</b>	<b>2.59</b>	<b>0.01</b>	<b>22.62</b>	<b>2.35</b>	<b>563.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Manlift/Bucket Truck	350	9	30	10
Sleeving Truck	300	3	30	5
Boom/Crane Truck	350	3	30	5
Bull Wheel Puller	500	3	21	5
Hydraulic Rewind Puller	300	3	21	5
Excavator	250	1	15	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Sleeving Truck	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Bull Wheel Puller	500	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Hydraulic Rewind Puller	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Excavator	250	0.105	0.339	0.785	0.002	0.026	0.024	158.540	0.009	0.004	Excavators

<sup>a</sup> From Table 110

**Table 55**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Remove Existing Conductor & GW**

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Manlift/Bucket Truck	8.54	36.87	99.62	0.19	2.96	2.72	19139.85	0.77	0.50	19,309.9
Sleeving Truck	1.86	7.30	15.60	0.04	0.52	0.48	3810.15	0.17	0.10	3,844.3
Boom/Crane Truck	1.99	6.64	16.07	0.03	0.58	0.53	2699.09	0.18	0.07	2,724.6
Bull Wheel Puller	1.86	7.30	15.60	0.04	0.52	0.48	3810.15	0.17	0.10	3,844.3
Hydraulic Rewind Puller	1.86	7.30	15.60	0.04	0.52	0.48	3810.15	0.17	0.10	3,844.3
Excavator	1.05	3.39	7.85	0.02	0.26	0.24	1585.40	0.09	0.04	1,600.2
<b>Total</b>	<b>17.16</b>	<b>68.78</b>	<b>170.35</b>	<b>0.34</b>	<b>5.38</b>	<b>4.95</b>	<b>34854.80</b>	<b>1.55</b>	<b>0.90</b>	<b>35167.61</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Manlift/Bucket Truck	0.13	0.55	1.49	0.00	0.04	0.04	287.10	0.01	0.01	289.6
Sleeving Truck	0.03	0.11	0.23	0.00	0.01	0.01	57.15	0.00	0.00	57.7
Boom/Crane Truck	0.03	0.10	0.24	0.00	0.01	0.01	40.49	0.00	0.00	40.9
Bull Wheel Puller	0.02	0.08	0.16	0.00	0.01	0.01	40.01	0.00	0.00	40.4
Hydraulic Rewind Puller	0.02	0.08	0.16	0.00	0.01	0.01	40.01	0.00	0.00	40.4
Excavator	0.01	0.03	0.06	0.00	0.00	0.00	11.89	0.00	0.00	12.0
<b>Total</b>	<b>0.23</b>	<b>0.94</b>	<b>2.36</b>	<b>0.00</b>	<b>0.07</b>	<b>0.07</b>	<b>476.64</b>	<b>0.02</b>	<b>0.01</b>	<b>480.91</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	12	30	N/A	28
Manlift/Bucket Truck	9	30	N/A	28
Sleeving Truck	3	30	N/A	28
Boom/Crane Truck	3	30	N/A	28
Truck, Semi Tractor	3	30	N/A	28
Dump Truck	1	15	N/A	28
Water Truck	2	30	N/A	28
Lowboy Truck/Trailer	9	30	N/A	28
Worker Commute	56	30	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										

**Table 55**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Remove Existing Conductor & GW**

None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Sleeving Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Truck, Semi Tractor	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.02	0.12	0.38	0.00	0.05	0.02	251.61	0.00	0.01	254.60
Manlift/Bucket Truck	0.11	0.72	4.17	0.01	0.14	0.08	892.14	0.00	0.03	901.68
Sleeving Truck	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Boom/Crane Truck	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Truck, Semi Tractor	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Dump Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Water Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Lowboy Truck/Trailer	0.11	0.72	4.17	0.01	0.14	0.08	892.14	0.00	0.03	901.68
Worker Commute	0.57	16.32	1.78	0.03	0.33	0.01	2264.04	0.14	0.07	2289.88
<b>Offsite Total</b>	<b>0.95</b>	<b>18.83</b>	<b>16.07</b>	<b>0.06</b>	<b>0.84</b>	<b>0.28</b>	<b>5489.47</b>	<b>0.16</b>	<b>0.18</b>	<b>5550.07</b>
<b>Total</b>	<b>0.95</b>	<b>18.83</b>	<b>16.07</b>	<b>0.06</b>	<b>0.84</b>	<b>0.28</b>	<b>5489.47</b>	<b>0.16</b>	<b>0.18</b>	<b>5550.07</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	3.77	0.00	0.00	3.82
Manlift/Bucket Truck	0.00	0.01	0.06	0.00	0.00	0.00	13.38	0.00	0.00	13.53
Sleeving Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.46	0.00	0.00	4.51
Boom/Crane Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.46	0.00	0.00	4.51
Truck, Semi Tractor	0.00	0.00	0.02	0.00	0.00	0.00	4.46	0.00	0.00	4.51
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.75

**Table 55**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Remove Existing Conductor & GW**

Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.97	0.00	0.00	3.01
Lowboy Truck/Trailer	0.00	0.01	0.06	0.00	0.00	0.00	13.38	0.00	0.00	13.53
Worker Commute	0.01	0.24	0.03	0.00	0.01	0.00	33.96	0.00	0.00	34.35
<b>Offsite Total</b>	<b>0.01</b>	<b>0.28</b>	<b>0.24</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>81.60</b>	<b>0.00</b>	<b>0.00</b>	<b>82.50</b>
<b>Total</b>	<b>0.01</b>	<b>0.28</b>	<b>0.24</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>81.60</b>	<b>0.00</b>	<b>0.00</b>	<b>82.50</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	12	Unpaved	18	30	1.311	0.131	283.07	28.31	4.25	0.42
1-Ton Truck, 4x4	12	Paved	10	30	0.003	0.001	0.40	0.10	0.01	0.00
Manlift/Bucket Truck	9	Unpaved	18	30	2.273	0.227	368.23	36.82	5.52	0.55
Manlift/Bucket Truck	9	Paved	10	30	0.003	0.001	0.30	0.07	0.00	0.00
Sleeving Truck	3	Unpaved	18	30	2.273	0.227	122.74	12.27	1.84	0.18
Sleeving Truck	3	Paved	10	30	0.003	0.001	0.10	0.02	0.00	0.00
Boom/Crane Truck	3	Unpaved	18	30	2.273	0.227	122.74	12.27	1.84	0.18
Boom/Crane Truck	3	Paved	10	30	0.003	0.001	0.10	0.02	0.00	0.00
Truck, Semi Tractor	3	Unpaved	18	30	2.273	0.227	122.74	12.27	1.84	0.18
Truck, Semi Tractor	3	Paved	10	30	0.003	0.001	0.10	0.02	0.00	0.00
Dump Truck	1	Unpaved	18	15	2.273	0.227	40.91	4.09	0.31	0.03
Dump Truck	1	Paved	10	15	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	2	Unpaved	18	30	2.273	0.227	81.83	8.18	1.23	0.12
Water Truck	2	Paved	10	30	0.003	0.001	0.07	0.02	0.00	0.00
Lowboy Truck/Trailer	9	Unpaved	18	30	2.273	0.227	368.23	36.82	5.52	0.55
Lowboy Truck/Trailer	9	Paved	10	30	0.003	0.001	0.30	0.07	0.00	0.00
Worker Commute	56	Paved	58	30	0.003	0.001	10.81	2.65	0.16	0.04
<b>Offsite Total</b>							<b>1522.72</b>	<b>154.05</b>	<b>22.53</b>	<b>2.28</b>
<b>Total</b>							<b>1522.72</b>	<b>154.05</b>	<b>22.53</b>	<b>2.28</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00

**Table 55**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Remove Existing Conductor & GW**

Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 56**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Removal**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	14.83	55.02	108.94	0.19	5.05	4.65	18,769.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>14.83</b>	<b>55.02</b>	<b>108.94</b>	<b>0.19</b>	<b>5.05</b>	<b>4.65</b>	<b>18769.6</b>
Offsite Motor Vehicle Exhaust	0.33	7.53	3.73	0.02	0.26	0.06	1,709.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	392.06	39.94	
<b>Offsite Total</b>	<b>0.33</b>	<b>7.53</b>	<b>3.73</b>	<b>0.02</b>	<b>392.32</b>	<b>40.00</b>	<b>1709.8</b>
<b>Total</b>	<b>15.16</b>	<b>62.55</b>	<b>112.68</b>	<b>0.21</b>	<b>397.37</b>	<b>44.65</b>	<b>20479.4</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.26	0.96	1.91	0.00	0.09	0.08	328.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.26</b>	<b>0.96</b>	<b>1.91</b>	<b>0.00</b>	<b>0.09</b>	<b>0.08</b>	<b>328.5</b>
Offsite Motor Vehicle Exhaust	0.01	0.13	0.07	0.00	0.00	0.00	29.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	6.86	0.70	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.13</b>	<b>0.07</b>	<b>0.00</b>	<b>6.87</b>	<b>0.70</b>	<b>29.9</b>
<b>Total</b>	<b>0.27</b>	<b>1.09</b>	<b>1.97</b>	<b>0.00</b>	<b>6.95</b>	<b>0.78</b>	<b>358.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	6	35	10
Excavator	300	4	35	7
R/T Crane (M)	215	3	35	5
R/T Crane (L)	300	6	35	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Excavator	300	0.149	0.485	1.022	0.002	0.037	0.034	233.525	0.013	0.006	Excavators
R/T Crane (M)	215	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
R/T Crane (L)	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

**Table 56**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Removal**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	3.78	18.90	24.05	0.03	2.02	1.85	2814.48	0.34	0.07	2,844.5
Excavator	4.18	13.57	28.63	0.06	1.02	0.94	6538.71	0.38	0.17	6,599.3
R/T Crane (M)	1.31	3.95	11.29	0.02	0.39	0.36	1680.87	0.12	0.04	1,696.9
R/T Crane (L)	5.56	18.60	44.98	0.07	1.62	1.49	7557.46	0.50	0.20	7,628.9
<b>Total</b>	<b>14.83</b>	<b>55.02</b>	<b>108.94</b>	<b>0.19</b>	<b>5.05</b>	<b>4.65</b>	<b>18591.53</b>	<b>1.34</b>	<b>0.48</b>	<b>18769.56</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.07	0.33	0.42	0.00	0.04	0.03	49.25	0.01	0.00	49.8
Excavator	0.07	0.24	0.50	0.00	0.02	0.02	114.43	0.01	0.00	115.5
R/T Crane (M)	0.02	0.07	0.20	0.00	0.01	0.01	29.42	0.00	0.00	29.7
R/T Crane (L)	0.10	0.33	0.79	0.00	0.03	0.03	132.26	0.01	0.00	133.5
<b>Total</b>	<b>0.26</b>	<b>0.96</b>	<b>1.91</b>	<b>0.00</b>	<b>0.09</b>	<b>0.08</b>	<b>325.35</b>	<b>0.02</b>	<b>0.01</b>	<b>328.47</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	6	35	N/A	28
Water Truck	2	35	N/A	28
Dump Truck	1	35	N/A	28
Flat Bed Truck/Trailer	3	35	N/A	28
Worker Commute	24	35	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

**Table 56**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Removal**

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.01	0.06	0.19	0.00	0.03	0.01	125.81	0.00	0.00	127.30
Water Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Dump Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Flat Bed Truck/Trailer	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Worker Commute	0.24	6.99	0.76	0.01	0.14	0.01	970.30	0.06	0.03	981.38
<b>Offsite Total</b>	<b>0.33</b>	<b>7.53</b>	<b>3.73</b>	<b>0.02</b>	<b>0.26</b>	<b>0.06</b>	<b>1690.87</b>	<b>0.06</b>	<b>0.06</b>	<b>1709.80</b>
<b>Total</b>	<b>0.33</b>	<b>7.53</b>	<b>3.73</b>	<b>0.02</b>	<b>0.26</b>	<b>0.06</b>	<b>1690.87</b>	<b>0.06</b>	<b>0.06</b>	<b>1709.80</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	2.20	0.00	0.00	2.23
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.47	0.00	0.00	3.51
Dump Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.73	0.00	0.00	1.75
Flat Bed Truck/Trailer	0.00	0.00	0.02	0.00	0.00	0.00	5.20	0.00	0.00	5.26
Worker Commute	0.00	0.12	0.01	0.00	0.00	0.00	16.98	0.00	0.00	17.17
<b>Offsite Total</b>	<b>0.01</b>	<b>0.13</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>29.59</b>	<b>0.00</b>	<b>0.00</b>	<b>29.92</b>
<b>Total</b>	<b>0.01</b>	<b>0.13</b>	<b>0.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>29.59</b>	<b>0.00</b>	<b>0.00</b>	<b>29.92</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 56**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Removal**

1-Ton Truck, 4x4	6	Unpaved	18	35	1.311	0.131	141.54	14.15	2.48	0.25
1-Ton Truck, 4x4	6	Paved	10	35	0.003	0.001	0.20	0.05	0.00	0.00
Water Truck	2	Unpaved	18	35	2.273	0.227	81.83	8.18	1.43	0.14
Water Truck	2	Paved	10	35	0.003	0.001	0.07	0.02	0.00	0.00
Dump Truck	1	Unpaved	18	35	2.273	0.227	40.91	4.09	0.72	0.07
Dump Truck	1	Paved	10	35	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Truck/Trailer	3	Unpaved	18	35	2.273	0.227	122.74	12.27	2.15	0.21
Flat Bed Truck/Trailer	3	Paved	10	35	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	24	Paved	58	35	0.003	0.001	4.63	1.14	0.08	0.02
<b>Offsite Total</b>							<b>392.06</b>	<b>39.94</b>	<b>6.86</b>	<b>0.70</b>
<b>Total</b>							<b>392.06</b>	<b>39.94</b>	<b>6.86</b>	<b>0.70</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 57**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Foundation Removal**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.67	13.49	25.93	0.06	1.09	1.01	5,551.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.67</b>	<b>13.49</b>	<b>25.93</b>	<b>0.06</b>	<b>1.09</b>	<b>1.01</b>	<b>5551.2</b>
Offsite Motor Vehicle Exhaust	0.19	5.04	1.47	0.01	0.13	0.02	887.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	104.85	10.95	
<b>Offsite Total</b>	<b>0.19</b>	<b>5.04</b>	<b>1.47</b>	<b>0.01</b>	<b>104.98</b>	<b>10.97</b>	<b>887.4</b>
<b>Total</b>	<b>3.86</b>	<b>18.53</b>	<b>27.40</b>	<b>0.07</b>	<b>106.07</b>	<b>11.98</b>	<b>6438.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.03	0.10	0.19	0.00	0.01	0.01	41.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.03</b>	<b>0.10</b>	<b>0.19</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>41.6</b>
Offsite Motor Vehicle Exhaust	0.00	0.04	0.01	0.00	0.00	0.00	6.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.79	0.08	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>0.00</b>	<b>0.79</b>	<b>0.08</b>	<b>6.7</b>
<b>Total</b>	<b>0.03</b>	<b>0.14</b>	<b>0.21</b>	<b>0.00</b>	<b>0.80</b>	<b>0.09</b>	<b>48.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	1	15	10
Backhoe/Front Loader	350	1	15	10
Excavator	250	1	15	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Backhoe/Front Loader	350	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes
Excavator	250	0.105	0.339	0.785	0.002	0.026	0.024	158.540	0.009	0.004	Excavators

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	0.63	3.15	4.01	0.01	0.34	0.31	469.08	0.06	0.01	474.1
Backhoe/Front Loader	1.98	6.96	14.07	0.04	0.50	0.46	3445.44	0.18	0.09	3,476.9
Excavator	1.05	3.39	7.85	0.02	0.26	0.24	1585.40	0.09	0.04	1,600.2

**Table 57**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Foundation Removal**

<b>Total</b>	<b>3.67</b>	<b>13.49</b>	<b>25.93</b>	<b>0.06</b>	<b>1.09</b>	<b>1.01</b>	<b>5499.92</b>	<b>0.33</b>	<b>0.14</b>	<b>5551.16</b>
--------------	-------------	--------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.00	0.02	0.03	0.00	0.00	0.00	3.52	0.00	0.00	3.6
Backhoe/Front Loader	0.01	0.05	0.11	0.00	0.00	0.00	25.84	0.00	0.00	26.1
Excavator	0.01	0.03	0.06	0.00	0.00	0.00	11.89	0.00	0.00	12.0
<b>Total</b>	<b>0.03</b>	<b>0.10</b>	<b>0.19</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>41.25</b>	<b>0.00</b>	<b>0.00</b>	<b>41.63</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	1	15	N/A	28
Water Truck	1	15	N/A	28
Dump Truck	1	15	N/A	28
Worker Commute	16	15	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.01	0.22	0.03	0.00	0.00	0.00	32.33	0.00	0.00	32.78
Water Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19

**Table 57**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Foundation Removal**

Dump Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Worker Commute	0.16	4.66	0.51	0.01	0.10	0.00	646.87	0.04	0.02	654.25
<b>Offsite Total</b>	<b>0.19</b>	<b>5.04</b>	<b>1.47</b>	<b>0.01</b>	<b>0.13</b>	<b>0.02</b>	<b>877.45</b>	<b>0.04</b>	<b>0.03</b>	<b>887.41</b>
<b>Total</b>	<b>0.19</b>	<b>5.04</b>	<b>1.47</b>	<b>0.01</b>	<b>0.13</b>	<b>0.02</b>	<b>877.45</b>	<b>0.04</b>	<b>0.03</b>	<b>887.41</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.25
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.75
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.75
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	4.85	0.00	0.00	4.91
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.58</b>	<b>0.00</b>	<b>0.00</b>	<b>6.66</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.58</b>	<b>0.00</b>	<b>0.00</b>	<b>6.66</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	1	Unpaved	18	15	1.102	0.110	19.83	1.98	0.15	0.01
3/4-Ton Truck, 4x4	1	Paved	10	15	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	18	15	2.273	0.227	40.91	4.09	0.31	0.03
Water Truck	1	Paved	10	15	0.003	0.001	0.03	0.01	0.00	0.00
Dump Truck	1	Unpaved	18	15	2.273	0.227	40.91	4.09	0.31	0.03
Dump Truck	1	Paved	10	15	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	16	Paved	58	15	0.003	0.001	3.09	0.76	0.02	0.01
<b>Offsite Total</b>							<b>104.85</b>	<b>10.95</b>	<b>0.79</b>	<b>0.08</b>
<b>Total</b>							<b>104.85</b>	<b>10.95</b>	<b>0.79</b>	<b>0.08</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 57**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Foundation Removal**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 58**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install LST Foundations**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	19.83	58.02	138.40	26.53	4.27	4.04	38,552.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	22.46	3.40	
<b>Onsite Total</b>	<b>19.83</b>	<b>58.02</b>	<b>138.40</b>	<b>26.53</b>	<b>26.73</b>	<b>7.44</b>	<b>38552.9</b>
Offsite Motor Vehicle Exhaust	1.45	17.32	44.21	0.11	1.60	0.79	10,710.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2379.13	239.53	
<b>Offsite Total</b>	<b>1.45</b>	<b>17.32</b>	<b>44.21</b>	<b>0.11</b>	<b>2380.74</b>	<b>240.32</b>	<b>10710.2</b>
<b>Total</b>	<b>21.28</b>	<b>75.33</b>	<b>182.61</b>	<b>26.64</b>	<b>2407.47</b>	<b>247.76</b>	<b>49263.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	1.76	6.82	12.68	0.43	0.42	0.38	3,587.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	3.08	0.47	
<b>Onsite Total</b>	<b>1.76</b>	<b>6.82</b>	<b>12.68</b>	<b>0.43</b>	<b>3.50</b>	<b>0.85</b>	<b>3587.0</b>
Offsite Motor Vehicle Exhaust	0.20	2.38	6.08	0.01	0.22	0.11	1,472.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	327.13	32.93	
<b>Offsite Total</b>	<b>0.20</b>	<b>2.38</b>	<b>6.08</b>	<b>0.01</b>	<b>327.35</b>	<b>33.04</b>	<b>1472.7</b>
<b>Total</b>	<b>1.96</b>	<b>9.20</b>	<b>18.76</b>	<b>0.44</b>	<b>330.85</b>	<b>33.89</b>	<b>5059.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	4	275	7
Backhoe/Front Loader	200	4	275	10
Auger Truck	500	4	275	10
Kaman K-MAX	1500	1	30	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes
Auger Truck	500	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Kaman K-MAX	1500	1.129	1.353	7.403	3.755	0.201	0.201	1978.170	0.055	0.063	See note b

<sup>a</sup> From Table 110

<sup>b</sup> All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>

PM2.5 emissions assumed equal to PM10

SOx emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO2/lbS]

Fuel use = 283.9 kg/hr from Guidance on the Determination of Helicopter Emissions

**Table 58  
Alternative Transmission and Subtransmission Construction Emissions with Segment 9  
Install LST Foundations**

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

CO2 emissions [lb/hr] = CO2 emission factor [kg/gal] / 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]

CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from

<http://www.theclimaterestory.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>

CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

Fuel use = 283.9 kg/hr from Guidance on the Determination of Helicopter Emissions

Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	3.71	12.40	29.99	0.05	1.08	1.00	5038.31	0.33	0.13	5,085.9
Backhoe/Front Loader	4.09	14.12	31.61	0.08	1.04	0.96	6863.31	0.37	0.18	6,926.3
Auger Truck	4.13	22.02	24.98	0.12	0.74	0.68	12441.16	0.37	0.32	12,548.9
Kaman K-MAX	7.90	9.47	51.82	26.28	1.40	1.40	13847.19	0.38	0.44	13,991.7
<b>Total</b>	<b>19.83</b>	<b>58.02</b>	<b>138.40</b>	<b>26.53</b>	<b>4.27</b>	<b>4.04</b>	<b>38189.97</b>	<b>1.46</b>	<b>1.07</b>	<b>38552.88</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.51	1.70	4.12	0.01	0.15	0.14	692.77	0.05	0.02	699.3
Backhoe/Front Loader	0.56	1.94	4.35	0.01	0.14	0.13	943.71	0.05	0.02	952.4
Auger Truck	0.57	3.03	3.44	0.02	0.10	0.09	1710.66	0.05	0.04	1,725.5
Kaman K-MAX	0.12	0.14	0.78	0.39	0.02	0.02	207.71	0.01	0.01	209.9
<b>Total</b>	<b>1.76</b>	<b>6.82</b>	<b>12.68</b>	<b>0.43</b>	<b>0.42</b>	<b>0.38</b>	<b>3554.84</b>	<b>0.15</b>	<b>0.09</b>	<b>3587.03</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	8	275	N/A	28
Boom/Crane Truck	4	275	N/A	28
Auger Truck	4	275	N/A	28
Water Truck	4	275	N/A	28
Dump Truck	8	275	N/A	28
Concrete Mixer Truck	34	275	N/A	60
Worker Commute	28	275	N/A	58

<sup>a</sup> Concrete truck based on 92,782 CY concrete (see Earthwork Fugitive PM below) over 275 days and 10 CY/truck load

**Table 58**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install LST Foundations**

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.06	1.76	0.26	0.00	0.02	0.00	258.61	0.02	0.01	262.24
Boom/Crane Truck	0.05	0.32	1.85	0.00	0.06	0.03	396.51	0.00	0.01	400.74
Auger Truck	0.05	0.32	1.85	0.00	0.06	0.03	396.51	0.00	0.01	400.74
Water Truck	0.05	0.32	1.85	0.00	0.06	0.03	396.51	0.00	0.01	400.74
Dump Truck	0.09	0.64	3.71	0.01	0.12	0.07	793.02	0.00	0.03	801.49
Concrete Mixer Truck	0.86	5.81	33.79	0.07	1.11	0.61	7222.12	0.04	0.25	7299.28
Worker Commute	0.28	8.16	0.89	0.01	0.17	0.01	1132.02	0.07	0.04	1144.94
<b>Offsite Total</b>	<b>1.45</b>	<b>17.32</b>	<b>44.21</b>	<b>0.11</b>	<b>1.60</b>	<b>0.79</b>	<b>10595.29</b>	<b>0.14</b>	<b>0.36</b>	<b>10710.19</b>
<b>Total</b>	<b>1.45</b>	<b>17.32</b>	<b>44.21</b>	<b>0.11</b>	<b>1.60</b>	<b>0.79</b>	<b>10595.29</b>	<b>0.14</b>	<b>0.36</b>	<b>10710.19</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.01	0.24	0.04	0.00	0.00	0.00	35.56	0.00	0.00	36.06
Boom/Crane Truck	0.01	0.04	0.26	0.00	0.01	0.00	54.52	0.00	0.00	55.10
Auger Truck	0.01	0.04	0.26	0.00	0.01	0.00	54.52	0.00	0.00	55.10
Water Truck	0.01	0.04	0.26	0.00	0.01	0.00	54.52	0.00	0.00	55.10
Dump Truck	0.01	0.09	0.51	0.00	0.02	0.01	109.04	0.00	0.00	110.20
Concrete Mixer Truck	0.12	0.80	4.65	0.01	0.15	0.08	993.04	0.01	0.03	1003.65

**Table 58**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install LST Foundations**

Worker Commute	0.04	1.12	0.12	0.00	0.02	0.00	155.65	0.01	0.01	157.43
<b>Offsite Total</b>	<b>0.20</b>	<b>2.38</b>	<b>6.08</b>	<b>0.01</b>	<b>0.22</b>	<b>0.11</b>	<b>1456.85</b>	<b>0.02</b>	<b>0.05</b>	<b>1472.65</b>
<b>Total</b>	<b>0.20</b>	<b>2.38</b>	<b>6.08</b>	<b>0.01</b>	<b>0.22</b>	<b>0.11</b>	<b>1456.85</b>	<b>0.02</b>	<b>0.05</b>	<b>1472.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	8	Unpaved	18	275	1.102	0.110	158.65	15.86	21.81	2.18
3/4-Ton Truck, 4x4	8	Paved	10	275	0.003	0.001	0.27	0.07	0.04	0.01
Boom/Crane Truck	4	Unpaved	18	275	2.273	0.227	163.66	16.37	22.50	2.25
Boom/Crane Truck	4	Paved	10	275	0.003	0.001	0.13	0.03	0.02	0.00
Auger Truck	4	Unpaved	18	275	2.273	0.227	163.66	16.37	22.50	2.25
Auger Truck	4	Paved	10	275	0.003	0.001	0.13	0.03	0.02	0.00
Water Truck	4	Unpaved	18	275	2.273	0.227	163.66	16.37	22.50	2.25
Water Truck	4	Paved	10	275	0.003	0.001	0.13	0.03	0.02	0.00
Dump Truck	8	Unpaved	18	275	2.273	0.227	327.32	32.73	45.01	4.50
Dump Truck	8	Paved	10	275	0.003	0.001	0.27	0.07	0.04	0.01
Concrete Mixer Truck	34	Unpaved	18	275	2.273	0.227	1391.10	139.11	191.28	19.13
Concrete Mixer Truck	34	Paved	42	275	0.003	0.001	4.75	1.17	0.65	0.16
Worker Commute	28	Paved	58	275	0.003	0.001	5.41	1.33	0.74	0.18
<b>Offsite Total</b>							<b>2379.13</b>	<b>239.53</b>	<b>327.13</b>	<b>32.93</b>
<b>Total</b>							<b>2379.13</b>	<b>239.53</b>	<b>327.13</b>	<b>32.93</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	338	92782	6.65E-02	1.01E-02	22.46	3.40	3.08	0.47
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>22.46</b>	<b>3.40</b>	<b>3.08</b>	<b>0.47</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 58**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install LST Foundations**

<sup>d</sup> Based on 443 LSTs, 4 foundations/LST, 6 ft. diameter x 50 ft. deep each over 275 days

**Table 59**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Steel Haul**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	39.67	62.12	248.50	100.37	7.11	6.96	64,385.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>39.67</b>	<b>62.12</b>	<b>248.50</b>	<b>100.37</b>	<b>7.11</b>	<b>6.96</b>	<b>64385.9</b>
Offsite Motor Vehicle Exhaust	0.57	13.63	6.17	0.03	0.39	0.09	2,834.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	793.62	80.39	
<b>Offsite Total</b>	<b>0.57</b>	<b>13.63</b>	<b>6.17</b>	<b>0.03</b>	<b>794.01</b>	<b>80.48</b>	<b>2834.9</b>
<b>Total</b>	<b>40.24</b>	<b>75.76</b>	<b>254.66</b>	<b>100.40</b>	<b>801.12</b>	<b>87.44</b>	<b>67220.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.92	1.64	6.00	2.01	0.18	0.17	1,480.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.92</b>	<b>1.64</b>	<b>6.00</b>	<b>2.01</b>	<b>0.18</b>	<b>0.17</b>	<b>1480.6</b>
Offsite Motor Vehicle Exhaust	0.02	0.51	0.23	0.00	0.01	0.00	106.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	29.76	3.01	
<b>Offsite Total</b>	<b>0.02</b>	<b>0.51</b>	<b>0.23</b>	<b>0.00</b>	<b>29.78</b>	<b>3.02</b>	<b>106.3</b>
<b>Total</b>	<b>0.94</b>	<b>2.16</b>	<b>6.23</b>	<b>2.01</b>	<b>29.95</b>	<b>3.19</b>	<b>1586.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
R/T Forklift	200	8	75	8
Bell 212	1800	2	40	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
R/T Forklift	200	0.111	0.359	0.919	0.002	0.030	0.028	170.643	0.010	0.004	Rough Terrain Forklifts
Bell 212	1800	2.328	2.797	13.547	7.160	0.370	0.370	3772.296	0.104	0.120	See note b

<sup>a</sup> From Table 110

<sup>b</sup> All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>

PM2.5 emissions assumed equal to PM10

SOx emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO2/lbS]

Fuel use = 541.3 kg/hr from Guidance on the Determination of Helicopter Emissions

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

CO2 emissions [lb/hr] = CO2 emission factor [kg/gal] x 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]

CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from

**Table 59**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Steel Haul**

<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>  
 CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors  
 N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors  
 Fuel use = 541.3 kg/hr from Guidance on the Determination of Helicopter Emissions  
 Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
R/T Forklift	7.08	22.97	58.84	0.12	1.93	1.78	10921.16	0.64	0.28	11,022.5
Bell 212	32.59	39.16	189.66	100.24	5.18	5.18	52812.15	1.46	1.68	53,363.4
<b>Total</b>	<b>39.67</b>	<b>62.12</b>	<b>248.50</b>	<b>100.37</b>	<b>7.11</b>	<b>6.96</b>	<b>63733.30</b>	<b>2.10</b>	<b>1.96</b>	<b>64385.86</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
R/T Forklift	0.27	0.86	2.21	0.00	0.07	0.07	409.54	0.02	0.01	413.3
Bell 212	0.65	0.78	3.79	2.00	0.10	0.10	1056.24	0.03	0.03	1,067.3
<b>Total</b>	<b>0.92</b>	<b>1.64</b>	<b>6.00</b>	<b>2.01</b>	<b>0.18</b>	<b>0.17</b>	<b>1465.79</b>	<b>0.05</b>	<b>0.04</b>	<b>1480.61</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	16	75	N/A	28
Water Truck	2	75	N/A	28
Flat Bed Truck/Trailer	8	75	N/A	28
Worker Commute	32	75	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

**Table 59**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Steel Haul**

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.13	3.51	0.51	0.01	0.05	0.00	517.22	0.03	0.02	524.48
Water Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Flat Bed Truck/Trailer	0.09	0.64	3.71	0.01	0.12	0.07	793.02	0.00	0.03	801.49
Worker Commute	0.33	9.32	1.02	0.02	0.19	0.01	1293.74	0.08	0.04	1308.51
<b>Offsite Total</b>	<b>0.57</b>	<b>13.63</b>	<b>6.17</b>	<b>0.03</b>	<b>0.39</b>	<b>0.09</b>	<b>2802.23</b>	<b>0.12</b>	<b>0.10</b>	<b>2834.85</b>
<b>Total</b>	<b>0.57</b>	<b>13.63</b>	<b>6.17</b>	<b>0.03</b>	<b>0.39</b>	<b>0.09</b>	<b>2802.23</b>	<b>0.12</b>	<b>0.10</b>	<b>2834.85</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.13	0.02	0.00	0.00	0.00	19.40	0.00	0.00	19.67
Water Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.43	0.00	0.00	7.51
Flat Bed Truck/Trailer	0.00	0.02	0.14	0.00	0.00	0.00	29.74	0.00	0.00	30.06
Worker Commute	0.01	0.35	0.04	0.00	0.01	0.00	48.52	0.00	0.00	49.07
<b>Offsite Total</b>	<b>0.02</b>	<b>0.51</b>	<b>0.23</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>105.08</b>	<b>0.00</b>	<b>0.00</b>	<b>106.31</b>
<b>Total</b>	<b>0.02</b>	<b>0.51</b>	<b>0.23</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>105.08</b>	<b>0.00</b>	<b>0.00</b>	<b>106.31</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	16	Unpaved	18	75	1.311	0.131	377.43	37.74	14.15	1.42
1-Ton Truck, 4x4	16	Paved	10	75	0.003	0.001	0.53	0.13	0.02	0.00
Water Truck	2	Unpaved	18	75	2.273	0.227	81.83	8.18	3.07	0.31



**Table 59**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Steel Haul**

Water Truck	2	Paved	10	75	0.003	0.001	0.07	0.02	0.00	0.00
Flat Bed Truck/Trailer	8	Unpaved	18	75	2.273	0.227	327.32	32.73	12.27	1.23
Flat Bed Truck/Trailer	8	Paved	10	75	0.003	0.001	0.27	0.07	0.01	0.00
Worker Commute	32	Paved	58	75	0.003	0.001	6.18	1.52	0.23	0.06
<b>Offsite Total</b>							<b>793.62</b>	<b>80.39</b>	<b>29.76</b>	<b>3.01</b>
<b>Total</b>							<b>793.62</b>	<b>80.39</b>	<b>29.76</b>	<b>3.01</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 60**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Steel Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	19.74	62.88	141.20	26.43	5.69	5.35	28,261.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>19.74</b>	<b>62.88</b>	<b>141.20</b>	<b>26.43</b>	<b>5.69</b>	<b>5.35</b>	<b>28261.1</b>
Offsite Motor Vehicle Exhaust	0.56	15.75	2.00	0.03	0.35	0.02	2,378.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	297.96	31.26	
<b>Offsite Total</b>	<b>0.56</b>	<b>15.75</b>	<b>2.00</b>	<b>0.03</b>	<b>298.30</b>	<b>31.29</b>	<b>2378.2</b>
<b>Total</b>	<b>20.31</b>	<b>78.63</b>	<b>143.20</b>	<b>26.46</b>	<b>304.00</b>	<b>36.64</b>	<b>30639.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	6.15	21.19	44.46	6.62	1.86	1.74	8,527.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>6.15</b>	<b>21.19</b>	<b>44.46</b>	<b>6.62</b>	<b>1.86</b>	<b>1.74</b>	<b>8527.9</b>
Offsite Motor Vehicle Exhaust	0.20	5.55	0.70	0.01	0.12	0.01	838.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	105.03	11.02	
<b>Offsite Total</b>	<b>0.20</b>	<b>5.55</b>	<b>0.70</b>	<b>0.01</b>	<b>105.15</b>	<b>11.03</b>	<b>838.3</b>
<b>Total</b>	<b>6.35</b>	<b>26.75</b>	<b>45.17</b>	<b>6.63</b>	<b>107.02</b>	<b>12.77</b>	<b>9366.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	5	705	7
R/T Forklift	125	4	705	7
R/T Crane (L)	300	5	705	10
Kaman K-MAX	1500	1	500	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
R/T Forklift	125	0.108	0.723	0.779	0.001	0.042	0.039	124.788	0.010	0.003	Rough Terrain Forklifts
R/T Crane (L)	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Kaman K-MAX	1500	1.129	1.353	7.403	3.755	0.201	0.201	1978.170	0.055	0.063	See note b

<sup>a</sup> From Table 110

<sup>b</sup> All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of

Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>

PM2.5 emissions assumed equal to PM10

SOx emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO2/lbS]

**Table 60**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Steel Assembly**

Fuel use = 283.9 kg/hr from Guidance on the Determination of Helicopter Emissions

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

CO2 emissions [lb/hr] = CO2 emission factor [kg/gal] x 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]

CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from

<http://www.theclimaterestry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>

CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

Fuel use = 283.9 kg/hr from Guidance on the Determination of Helicopter Emissions

Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	2.20	11.03	14.03	0.02	1.18	1.08	1641.78	0.20	0.04	1,659.3
R/T Forklift	3.02	20.24	21.80	0.04	1.18	1.09	3494.05	0.27	0.09	3,528.1
R/T Crane (L)	6.62	22.14	53.55	0.09	1.93	1.78	8996.98	0.60	0.23	9,082.0
Kaman K-MAX	7.90	9.47	51.82	26.28	1.40	1.40	13847.19	0.38	0.44	13,991.7
<b>Total</b>	<b>19.74</b>	<b>62.88</b>	<b>141.20</b>	<b>26.43</b>	<b>5.69</b>	<b>5.35</b>	<b>27980.00</b>	<b>1.45</b>	<b>0.81</b>	<b>28261.11</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.78	3.89	4.94	0.01	0.41	0.38	578.73	0.07	0.02	584.9
R/T Forklift	1.06	7.14	7.68	0.01	0.42	0.38	1231.65	0.10	0.03	1,243.6
R/T Crane (L)	2.33	7.80	18.88	0.03	0.68	0.63	3171.43	0.21	0.08	3,201.4
Kaman K-MAX	1.98	2.37	12.95	6.57	0.35	0.35	3461.80	0.10	0.11	3,497.9
<b>Total</b>	<b>6.15</b>	<b>21.19</b>	<b>44.46</b>	<b>6.62</b>	<b>1.86</b>	<b>1.74</b>	<b>8443.61</b>	<b>0.47</b>	<b>0.24</b>	<b>8527.89</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	5	705	N/A	28
1-Ton Truck, 4x4	8	705	N/A	28
Worker Commute	50	705	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
---------	----------	-----------------------------	----------------------------	-----------------------------	-----------------------------	------------------------------	-------------------------------	-----------------------------	-----------------------------	-----------------------------

**Table 60**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Steel Assembly**

Onsite										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Offsite										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Onsite										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Offsite										
3/4-Ton Truck, 4x4	0.04	1.10	0.16	0.00	0.01	0.00	161.63	0.01	0.01	163.90
1-Ton Truck, 4x4	0.01	0.08	0.25	0.00	0.03	0.01	167.74	0.00	0.01	169.74
Worker Commute	0.51	14.57	1.59	0.02	0.30	0.01	2021.47	0.12	0.07	2044.54
<b>Offsite Total</b>	<b>0.56</b>	<b>15.75</b>	<b>2.00</b>	<b>0.03</b>	<b>0.35</b>	<b>0.02</b>	<b>2350.84</b>	<b>0.13</b>	<b>0.08</b>	<b>2378.18</b>
<b>Total</b>	<b>0.56</b>	<b>15.75</b>	<b>2.00</b>	<b>0.03</b>	<b>0.35</b>	<b>0.02</b>	<b>2350.84</b>	<b>0.13</b>	<b>0.08</b>	<b>2378.18</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Onsite										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Offsite										
3/4-Ton Truck, 4x4	0.01	0.39	0.06	0.00	0.01	0.00	56.97	0.00	0.00	57.78
1-Ton Truck, 4x4	0.01	0.03	0.09	0.00	0.01	0.00	59.13	0.00	0.00	59.83
Worker Commute	0.18	5.14	0.56	0.01	0.11	0.00	712.57	0.04	0.02	720.70
<b>Offsite Total</b>	<b>0.20</b>	<b>5.55</b>	<b>0.70</b>	<b>0.01</b>	<b>0.12</b>	<b>0.01</b>	<b>828.67</b>	<b>0.05</b>	<b>0.03</b>	<b>838.31</b>
<b>Total</b>	<b>0.20</b>	<b>5.55</b>	<b>0.70</b>	<b>0.01</b>	<b>0.12</b>	<b>0.01</b>	<b>828.67</b>	<b>0.05</b>	<b>0.03</b>	<b>838.31</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
Onsite										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 60**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Steel Assembly**

<b>Offsite</b>										
3/4-Ton Truck, 4x4	5	Unpaved	18	705	1.102	0.110	99.15	9.92	34.95	3.50
3/4-Ton Truck, 4x4	5	Paved	10	705	0.003	0.001	0.17	0.04	0.06	0.01
1-Ton Truck, 4x4	8	Unpaved	18	705	1.311	0.131	188.71	18.87	66.52	6.65
1-Ton Truck, 4x4	8	Paved	10	705	0.003	0.001	0.27	0.07	0.09	0.02
Worker Commute	50	Paved	58	705	0.003	0.001	9.66	2.37	3.40	0.84
<b>Offsite Total</b>							<b>297.96</b>	<b>31.26</b>	<b>105.03</b>	<b>11.02</b>
<b>Total</b>							<b>297.96</b>	<b>31.26</b>	<b>105.03</b>	<b>11.02</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 61**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Erection**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	70.00	104.00	750.85	238.25	17.21	16.99	136,353.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>70.00</b>	<b>104.00</b>	<b>750.85</b>	<b>238.25</b>	<b>17.21</b>	<b>16.99</b>	<b>136353.4</b>
Offsite Motor Vehicle Exhaust	0.75	19.72	4.73	0.04	0.49	0.07	3,386.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	564.22	58.21	
<b>Offsite Total</b>	<b>0.75</b>	<b>19.72</b>	<b>4.73</b>	<b>0.04</b>	<b>564.71</b>	<b>58.28</b>	<b>3386.4</b>
<b>Total</b>	<b>70.75</b>	<b>123.72</b>	<b>755.58</b>	<b>238.29</b>	<b>581.92</b>	<b>75.27</b>	<b>139739.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	8.29	14.95	39.81	10.91	1.23	1.18	8,190.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>8.29</b>	<b>14.95</b>	<b>39.81</b>	<b>10.91</b>	<b>1.23</b>	<b>1.18</b>	<b>8190.7</b>
Offsite Motor Vehicle Exhaust	0.19	4.92	1.14	0.01	0.12	0.02	836.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	136.96	14.14	
<b>Offsite Total</b>	<b>0.19</b>	<b>4.92</b>	<b>1.14</b>	<b>0.01</b>	<b>137.08</b>	<b>14.16</b>	<b>836.6</b>
<b>Total</b>	<b>8.48</b>	<b>19.87</b>	<b>40.95</b>	<b>10.92</b>	<b>138.31</b>	<b>15.34</b>	<b>9027.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	60	4	500	7
R/T Crane (M)	215	4	500	7
R/T Crane (L)	275	4	500	7
Hughes 500 E Helicopter	420	3	300	7
Sikorsky S64	9000	2	60	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	60	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
R/T Crane (M)	215	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes
R/T Crane (L)	275	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Hughes 500 E Helicopter	420	1.765	2.199	1.421	1.485	0.044	0.044	782.418	0.022	0.025	See note b
Sikorsky S64	9000	1.786	2.088	47.051	14.783	0.966	0.966	7788.012	0.216	0.248	See note c

<sup>a</sup> From Table 110

<sup>b</sup> All except SOX, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>

**Table 61  
Alternative Transmission and Subtransmission Construction Emissions with Segment 9  
LST Erection**

PM2.5 emissions assumed equal to PM10  
 SOx emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO2/lbS]  
 Fuel use = 112.3 kg/hr from Guidance on the Determination of Helicopter Emissions  
 Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A  
 CO2 emissions [lb/hr] = CO2 emission factor [kg/gal] x 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]  
 CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from  
<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>  
 CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors  
 N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors  
 Fuel use = 112.3 kg/hr from Guidance on the Determination of Helicopter Emissions  
 Jet-A density = 6.8 lb/gal  
 ° All except SOx, PM2.5, CO2, CH4 and N2O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>  
 PM2.5 emissions assumed equal to PM10  
 SOx emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO2/lbS]  
 Fuel use = 1,118 kg/hr from Guidance on the Determination of Helicopter Emissions  
 Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A  
 CO2 emissions [lb/hr] = CO2 emission factor [kg/gal] x 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]  
 CO2 emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from  
<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>  
 CH4 emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors  
 N2O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors  
 Fuel use = 1,118 kg/hr from Guidance on the Determination of Helicopter Emissions  
 Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.76	8.82	11.22	0.02	0.94	0.87	1313.43	0.16	0.03	1,327.4
R/T Crane (M)	2.45	7.37	21.07	0.04	0.73	0.67	3137.63	0.22	0.08	3,167.5
R/T Crane (L)	3.71	12.40	29.99	0.05	1.08	1.00	5038.31	0.33	0.13	5,085.9
Hughes 500 E Helicopter	37.08	46.18	29.85	31.19	0.93	0.93	16430.79	0.46	0.52	16,602.3
Sikorsky S64	25.01	29.24	658.72	206.96	13.53	13.53	109032.17	3.02	3.47	110,170.2
<b>Total</b>	<b>70.00</b>	<b>104.00</b>	<b>750.85</b>	<b>238.25</b>	<b>17.21</b>	<b>16.99</b>	<b>134952.32</b>	<b>4.19</b>	<b>4.24</b>	<b>136353.44</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.44	2.21	2.81	0.00	0.24	0.22	328.36	0.04	0.01	331.9
R/T Crane (M)	0.61	1.84	5.27	0.01	0.18	0.17	784.41	0.06	0.02	791.9
R/T Crane (L)	0.93	3.10	7.50	0.01	0.27	0.25	1259.58	0.08	0.03	1,271.5
Hughes 500 E Helicopter	5.56	6.93	4.48	4.68	0.14	0.14	2464.62	0.07	0.08	2,490.3
Sikorsky S64	0.75	0.88	19.76	6.21	0.41	0.41	3270.97	0.09	0.10	3,305.1
<b>Total</b>	<b>8.29</b>	<b>14.95</b>	<b>39.81</b>	<b>10.91</b>	<b>1.23</b>	<b>1.18</b>	<b>8107.92</b>	<b>0.34</b>	<b>0.24</b>	<b>8190.68</b>

**Table 61  
Alternative Transmission and Subtransmission Construction Emissions with Segment 9  
LST Erection**

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	8	500	N/A	28
1-Ton Truck, 4x4	8	500	N/A	28
Jet A Fuel Truck	1	300	N/A	28
Water Truck	4	500	N/A	28
Worker Commute	60	500	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Jet A Fuel Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.06	1.76	0.26	0.00	0.02	0.00	258.61	0.02	0.01	262.24
1-Ton Truck, 4x4	0.01	0.08	0.25	0.00	0.03	0.01	167.74	0.00	0.01	169.74
Jet A Fuel Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Water Truck	0.05	0.32	1.85	0.00	0.06	0.03	396.51	0.00	0.01	400.74
Worker Commute	0.61	17.48	1.91	0.03	0.36	0.01	2425.76	0.15	0.08	2453.45
<b>Offsite Total</b>	<b>0.75</b>	<b>19.72</b>	<b>4.73</b>	<b>0.04</b>	<b>0.49</b>	<b>0.07</b>	<b>3347.75</b>	<b>0.17</b>	<b>0.11</b>	<b>3386.36</b>
<b>Total</b>	<b>0.75</b>	<b>19.72</b>	<b>4.73</b>	<b>0.04</b>	<b>0.49</b>	<b>0.07</b>	<b>3347.75</b>	<b>0.17</b>	<b>0.11</b>	<b>3386.36</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions



**Table 61**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Erection**

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.44	0.06	0.00	0.01	0.00	64.65	0.00	0.00	65.56
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	41.94	0.00	0.00	42.43
Jet A Fuel Truck	0.00	0.01	0.07	0.00	0.00	0.00	14.87	0.00	0.00	15.03
Water Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Worker Commute	0.15	4.37	0.48	0.01	0.09	0.00	606.44	0.04	0.02	613.36
<b>Offsite Total</b>	<b>0.19</b>	<b>4.92</b>	<b>1.14</b>	<b>0.01</b>	<b>0.12</b>	<b>0.02</b>	<b>827.02</b>	<b>0.04</b>	<b>0.03</b>	<b>836.57</b>
<b>Total</b>	<b>0.19</b>	<b>4.92</b>	<b>1.14</b>	<b>0.01</b>	<b>0.12</b>	<b>0.02</b>	<b>827.02</b>	<b>0.04</b>	<b>0.03</b>	<b>836.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	8	Unpaved	18	500	1.102	0.110	158.65	15.86	39.66	3.97
3/4-Ton Truck, 4x4	8	Paved	10	500	0.003	0.001	0.27	0.07	0.07	0.02
1-Ton Truck, 4x4	8	Unpaved	18	500	1.311	0.131	188.71	18.87	47.18	4.72
1-Ton Truck, 4x4	8	Paved	10	500	0.003	0.001	0.27	0.07	0.07	0.02
Jet A Fuel Truck	1	Unpaved	18	300	2.273	0.227	40.91	4.09	6.14	0.61
Jet A Fuel Truck	1	Paved	10	300	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	4	Unpaved	18	500	2.273	0.227	163.66	16.37	40.91	4.09
Water Truck	4	Paved	10	500	0.003	0.001	0.13	0.03	0.03	0.01
Worker Commute	60	Paved	58	500	0.003	0.001	11.59	2.84	2.90	0.71
<b>Offsite Total</b>							<b>564.22</b>	<b>58.21</b>	<b>136.96</b>	<b>14.14</b>
<b>Total</b>							<b>564.22</b>	<b>58.21</b>	<b>136.96</b>	<b>14.14</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 61**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**LST Erection**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 62**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install TSP Foundations**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	5.96	24.27	43.29	0.12	1.43	1.32	12,280.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	9.84	1.49	
<b>Onsite Total</b>	<b>5.96</b>	<b>24.27</b>	<b>43.29</b>	<b>0.12</b>	<b>11.27</b>	<b>2.81</b>	<b>12280.6</b>
Offsite Motor Vehicle Exhaust	0.65	8.01	19.19	0.05	0.70	0.34	4,709.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1064.90	107.20	
<b>Offsite Total</b>	<b>0.65</b>	<b>8.01</b>	<b>19.19</b>	<b>0.05</b>	<b>1065.60</b>	<b>107.54</b>	<b>4709.1</b>
<b>Total</b>	<b>6.61</b>	<b>32.29</b>	<b>62.48</b>	<b>0.17</b>	<b>1076.87</b>	<b>110.35</b>	<b>16989.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.98	3.86	7.29	0.02	0.24	0.22	1,911.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.43	0.06	
<b>Onsite Total</b>	<b>0.98</b>	<b>3.86</b>	<b>7.29</b>	<b>0.02</b>	<b>0.67</b>	<b>0.29</b>	<b>1911.1</b>
Offsite Motor Vehicle Exhaust	0.10	1.33	2.64	0.01	0.10	0.05	674.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	156.89	15.80	
<b>Offsite Total</b>	<b>0.10</b>	<b>1.33</b>	<b>2.64</b>	<b>0.01</b>	<b>156.99</b>	<b>15.85</b>	<b>674.5</b>
<b>Total</b>	<b>1.08</b>	<b>5.18</b>	<b>9.93</b>	<b>0.03</b>	<b>157.66</b>	<b>16.14</b>	<b>2585.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	2	370	7
Backhoe/Front Loader	200	2	370	10
Auger Truck	500	2	255	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes
Auger Truck	500	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	1.85	6.20	14.99	0.02	0.54	0.50	2519.15	0.17	0.07	2,543.0
Backhoe/Front Loader	2.05	7.06	15.80	0.04	0.52	0.48	3431.66	0.18	0.09	3,463.1
Auger Truck	2.06	11.01	12.49	0.06	0.37	0.34	6220.58	0.19	0.16	6,274.5

**Table 62**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install TSP Foundations**

<b>Total</b>	<b>5.96</b>	<b>24.27</b>	<b>43.29</b>	<b>0.12</b>	<b>1.43</b>	<b>1.32</b>	<b>12171.39</b>	<b>0.54</b>	<b>0.32</b>	<b>12280.57</b>
--------------	-------------	--------------	--------------	-------------	-------------	-------------	-----------------	-------------	-------------	-----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.34	1.15	2.77	0.00	0.10	0.09	466.04	0.03	0.01	470.4
Backhoe/Front Loader	0.38	1.31	2.92	0.01	0.10	0.09	634.86	0.03	0.02	640.7
Auger Truck	0.26	1.40	1.59	0.01	0.05	0.04	793.12	0.02	0.02	800.0
<b>Total</b>	<b>0.98</b>	<b>3.86</b>	<b>7.29</b>	<b>0.02</b>	<b>0.24</b>	<b>0.22</b>	<b>1894.02</b>	<b>0.09</b>	<b>0.05</b>	<b>1911.12</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	370	N/A	28
Boom/Crane Truck	2	370	N/A	28
Auger Truck	2	255	N/A	28
Water Truck	2	370	N/A	28
Dump Truck	2	370	N/A	28
Concrete Mixer Truck	15	255	N/A	60
Worker Commute	12	370	N/A	58

<sup>a</sup> Concrete mixer trucks based on 148 CY/TSP, 1 TSP/day and 10 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

**Table 62**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install TSP Foundations**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.05	1.32	0.19	0.00	0.02	0.00	193.96	0.01	0.01	196.68
Boom/Crane Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Auger Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Water Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Dump Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Concrete Mixer Truck	0.38	2.56	14.91	0.03	0.49	0.27	3186.23	0.02	0.11	3220.27
Worker Commute	0.12	3.50	0.38	0.01	0.07	0.00	485.15	0.03	0.02	490.69
<b>Offsite Total</b>	<b>0.65</b>	<b>8.01</b>	<b>19.19</b>	<b>0.05</b>	<b>0.70</b>	<b>0.34</b>	<b>4658.35</b>	<b>0.06</b>	<b>0.16</b>	<b>4709.13</b>
<b>Total</b>	<b>0.65</b>	<b>8.01</b>	<b>19.19</b>	<b>0.05</b>	<b>0.70</b>	<b>0.34</b>	<b>4658.35</b>	<b>0.06</b>	<b>0.16</b>	<b>4709.13</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.01	0.24	0.04	0.00	0.00	0.00	35.88	0.00	0.00	36.39
Boom/Crane Truck	0.00	0.03	0.17	0.00	0.01	0.00	36.68	0.00	0.00	37.07
Auger Truck	0.00	0.02	0.12	0.00	0.00	0.00	25.28	0.00	0.00	25.55
Water Truck	0.00	0.03	0.17	0.00	0.01	0.00	36.68	0.00	0.00	37.07
Dump Truck	0.00	0.03	0.17	0.00	0.01	0.00	36.68	0.00	0.00	37.07
Concrete Mixer Truck	0.05	0.33	1.90	0.00	0.06	0.03	406.24	0.00	0.01	410.58
Worker Commute	0.02	0.65	0.07	0.00	0.01	0.00	89.75	0.01	0.00	90.78
<b>Offsite Total</b>	<b>0.10</b>	<b>1.33</b>	<b>2.64</b>	<b>0.01</b>	<b>0.10</b>	<b>0.05</b>	<b>667.19</b>	<b>0.01</b>	<b>0.02</b>	<b>674.50</b>
<b>Total</b>	<b>0.10</b>	<b>1.33</b>	<b>2.64</b>	<b>0.01</b>	<b>0.10</b>	<b>0.05</b>	<b>667.19</b>	<b>0.01</b>	<b>0.02</b>	<b>674.50</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	6	Unpaved	18	370	1.102	0.110	118.99	11.90	22.01	2.20

**Table 62**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install TSP Foundations**

3/4-Ton Truck, 4x4	6	Paved	10	370	0.003	0.001	0.20	0.05	0.04	0.01
Boom/Crane Truck	2	Unpaved	18	370	2.273	0.227	81.83	8.18	15.14	1.51
Boom/Crane Truck	2	Paved	10	370	0.003	0.001	0.07	0.02	0.01	0.00
Auger Truck	2	Unpaved	18	255	2.273	0.227	81.83	8.18	10.43	1.04
Auger Truck	2	Paved	10	255	0.003	0.001	0.07	0.02	0.01	0.00
Water Truck	2	Unpaved	18	370	2.273	0.227	81.83	8.18	15.14	1.51
Water Truck	2	Paved	10	370	0.003	0.001	0.07	0.02	0.01	0.00
Dump Truck	2	Unpaved	18	370	2.273	0.227	81.83	8.18	15.14	1.51
Dump Truck	2	Paved	10	370	0.003	0.001	0.07	0.02	0.01	0.00
Concrete Mixer Truck	15	Unpaved	18	255	2.273	0.227	613.72	61.37	78.25	7.82
Concrete Mixer Truck	15	Paved	42	255	0.003	0.001	2.10	0.51	0.27	0.07
Worker Commute	12	Paved	58	370	0.003	0.001	2.32	0.57	0.43	0.11
<b>Offsite Total</b>							<b>1064.90</b>	<b>107.20</b>	<b>156.89</b>	<b>15.80</b>
<b>Total</b>							<b>1064.90</b>	<b>107.20</b>	<b>156.89</b>	<b>15.80</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	148	12831	6.65E-02	1.01E-02	9.84	1.49	0.43	0.06
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>9.84</b>	<b>1.49</b>	<b>0.43</b>	<b>0.06</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Daily based on 1 TSP, 13 ft. diameter x 30 ft. deep; total based on 87 TSPs

**Table 63**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Haul**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.06	3.54	8.57	0.01	0.31	0.28	1,453.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.06</b>	<b>3.54</b>	<b>8.57</b>	<b>0.01</b>	<b>0.31</b>	<b>0.28</b>	<b>1453.1</b>
Offsite Motor Vehicle Exhaust	0.10	1.92	2.05	0.01	0.09	0.03	629.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	204.29	20.57	
<b>Offsite Total</b>	<b>0.10</b>	<b>1.92</b>	<b>2.05</b>	<b>0.01</b>	<b>204.38</b>	<b>20.61</b>	<b>629.9</b>
<b>Total</b>	<b>1.16</b>	<b>5.47</b>	<b>10.61</b>	<b>0.02</b>	<b>204.69</b>	<b>20.89</b>	<b>2083.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.04	0.14	0.34	0.00	0.01	0.01	58.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.04</b>	<b>0.14</b>	<b>0.34</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>58.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.08	0.00	0.00	0.00	25.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	8.17	0.82	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>0.00</b>	<b>8.18</b>	<b>0.82</b>	<b>25.2</b>
<b>Total</b>	<b>0.05</b>	<b>0.22</b>	<b>0.42</b>	<b>0.00</b>	<b>8.19</b>	<b>0.84</b>	<b>83.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	1	80	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
<b>Total</b>	<b>1.06</b>	<b>3.54</b>	<b>8.57</b>	<b>0.01</b>	<b>0.31</b>	<b>0.28</b>	<b>1439.52</b>	<b>0.10</b>	<b>0.04</b>	<b>1453.12</b>

**Table 63**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Haul**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.04	0.14	0.34	0.00	0.01	0.01	57.58	0.00	0.00	58.1
<b>Total</b>	<b>0.04</b>	<b>0.14</b>	<b>0.34</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>57.58</b>	<b>0.00</b>	<b>0.00</b>	<b>58.12</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	2	80	N/A	28
Boom/Crane Truck	1	80	N/A	28
Water Truck	1	80	N/A	28
Flat Bed Pole Truck	2	80	N/A	28
Worker Commute	4	80	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Pole Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



**Table 63**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Haul**

<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.44	0.06	0.00	0.01	0.00	64.65	0.00	0.00	65.56
Boom/Crane Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Water Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Flat Bed Pole Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.10</b>	<b>1.92</b>	<b>2.05</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>622.88</b>	<b>0.02</b>	<b>0.02</b>	<b>629.87</b>
<b>Total</b>	<b>0.10</b>	<b>1.92</b>	<b>2.05</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>622.88</b>	<b>0.02</b>	<b>0.02</b>	<b>629.87</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	2.59	0.00	0.00	2.62
Boom/Crane Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.97	0.00	0.00	4.01
Water Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.97	0.00	0.00	4.01
Flat Bed Pole Truck	0.00	0.01	0.04	0.00	0.00	0.00	7.93	0.00	0.00	8.01
Worker Commute	0.00	0.05	0.01	0.00	0.00	0.00	6.47	0.00	0.00	6.54
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>24.92</b>	<b>0.00</b>	<b>0.00</b>	<b>25.19</b>
<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>24.92</b>	<b>0.00</b>	<b>0.00</b>	<b>25.19</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	2	Unpaved	18	80	1.102	0.110	39.66	3.97	1.59	0.16
3/4-Ton Truck, 4x4	2	Paved	10	80	0.003	0.001	0.07	0.02	0.00	0.00
Boom/Crane Truck	1	Unpaved	18	80	2.273	0.227	40.91	4.09	1.64	0.16
Boom/Crane Truck	1	Paved	10	80	0.003	0.001	0.03	0.01	0.00	0.00

**Table 63**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Haul**

Water Truck	1	Unpaved	18	80	2.273	0.227	40.91	4.09	1.64	0.16
Water Truck	1	Paved	10	80	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Pole Truck	2	Unpaved	18	80	2.273	0.227	81.83	8.18	3.27	0.33
Flat Bed Pole Truck	2	Paved	10	80	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	80	0.003	0.001	0.77	0.19	0.03	0.01
<b>Offsite Total</b>							<b>204.29</b>	<b>20.57</b>	<b>8.17</b>	<b>0.82</b>
<b>Total</b>							<b>204.29</b>	<b>20.57</b>	<b>8.17</b>	<b>0.82</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 64**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.91	14.97	29.71	0.05	1.42	1.30	4,667.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4667.8</b>
Offsite Motor Vehicle Exhaust	0.29	6.94	2.81	0.02	0.21	0.05	1,460.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	428.19	43.40	
<b>Offsite Total</b>	<b>0.29</b>	<b>6.94</b>	<b>2.81</b>	<b>0.02</b>	<b>428.40</b>	<b>43.45</b>	<b>1460.8</b>
<b>Total</b>	<b>4.20</b>	<b>21.91</b>	<b>32.51</b>	<b>0.06</b>	<b>429.82</b>	<b>44.75</b>	<b>6128.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.10	0.37	0.74	0.00	0.04	0.03	116.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.10</b>	<b>0.37</b>	<b>0.74</b>	<b>0.00</b>	<b>0.04</b>	<b>0.03</b>	<b>116.7</b>
Offsite Motor Vehicle Exhaust	0.01	0.17	0.07	0.00	0.01	0.00	36.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	10.70	1.09	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.17</b>	<b>0.07</b>	<b>0.00</b>	<b>10.71</b>	<b>1.09</b>	<b>36.5</b>
<b>Total</b>	<b>0.11</b>	<b>0.55</b>	<b>0.81</b>	<b>0.00</b>	<b>10.75</b>	<b>1.12</b>	<b>153.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	3	50	6
Boom/Crane Truck	350	3	50	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.13	5.67	7.21	0.01	0.60	0.56	844.35	0.10	0.02	853.4
Boom/Crane Truck	2.78	9.30	22.49	0.04	0.81	0.75	3778.73	0.25	0.10	3,814.4
<b>Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4623.08</b>	<b>0.35</b>	<b>0.12</b>	<b>4667.80</b>

**Table 64**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Assembly**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.03	0.14	0.18	0.00	0.02	0.01	21.11	0.00	0.00	21.3
Boom/Crane Truck	0.07	0.23	0.56	0.00	0.02	0.02	94.47	0.01	0.00	95.4
<b>Total</b>	<b>0.10</b>	<b>0.37</b>	<b>0.74</b>	<b>0.00</b>	<b>0.04</b>	<b>0.03</b>	<b>115.58</b>	<b>0.01</b>	<b>0.00</b>	<b>116.69</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	50	N/A	28
1-Ton Truck, 4x4	6	50	N/A	28
Boom/Crane Truck	3	50	N/A	28
Water Truck	1	50	N/A	28
Worker Commute	18	50	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 64**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Assembly**

3/4-Ton Truck, 4x4	0.05	1.32	0.19	0.00	0.02	0.00	193.96	0.01	0.01	196.68
1-Ton Truck, 4x4	0.01	0.06	0.19	0.00	0.03	0.01	125.81	0.00	0.00	127.30
Boom/Crane Truck	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Water Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.29</b>	<b>6.94</b>	<b>2.81</b>	<b>0.02</b>	<b>0.21</b>	<b>0.05</b>	<b>1444.00</b>	<b>0.06</b>	<b>0.05</b>	<b>1460.76</b>
<b>Total</b>	<b>0.29</b>	<b>6.94</b>	<b>2.81</b>	<b>0.02</b>	<b>0.21</b>	<b>0.05</b>	<b>1444.00</b>	<b>0.06</b>	<b>0.05</b>	<b>1460.76</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.03	0.00	0.00	0.00	0.00	4.85	0.00	0.00	4.92
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	3.15	0.00	0.00	3.18
Boom/Crane Truck	0.00	0.01	0.03	0.00	0.00	0.00	7.43	0.00	0.00	7.51
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.48	0.00	0.00	2.50
Worker Commute	0.00	0.13	0.01	0.00	0.00	0.00	18.19	0.00	0.00	18.40
<b>Offsite Total</b>	<b>0.01</b>	<b>0.17</b>	<b>0.07</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>36.10</b>	<b>0.00</b>	<b>0.00</b>	<b>36.52</b>
<b>Total</b>	<b>0.01</b>	<b>0.17</b>	<b>0.07</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>36.10</b>	<b>0.00</b>	<b>0.00</b>	<b>36.52</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	6	Unpaved	18	50	1.102	0.110	118.99	11.90	2.97	0.30
3/4-Ton Truck, 4x4	6	Paved	10	50	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Truck, 4x4	6	Unpaved	18	50	1.311	0.131	141.54	14.15	3.54	0.35
1-Ton Truck, 4x4	6	Paved	10	50	0.003	0.001	0.20	0.05	0.00	0.00
Boom/Crane Truck	3	Unpaved	18	50	2.273	0.227	122.74	12.27	3.07	0.31
Boom/Crane Truck	3	Paved	10	50	0.003	0.001	0.10	0.02	0.00	0.00
Water Truck	1	Unpaved	18	50	2.273	0.227	40.91	4.09	1.02	0.10
Water Truck	1	Paved	10	50	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	18	Paved	58	50	0.003	0.001	3.48	0.85	0.09	0.02

**Table 64**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Assembly**

<b>Offsite Total</b>							<b>428.19</b>	<b>43.40</b>	<b>10.70</b>	<b>1.09</b>
<b>Total</b>							<b>428.19</b>	<b>43.40</b>	<b>10.70</b>	<b>1.09</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 65**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Erection**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.91	14.97	29.71	0.05	1.42	1.30	4,667.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4667.8</b>
Offsite Motor Vehicle Exhaust	0.25	6.70	1.42	0.01	0.17	0.02	1,160.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	305.34	31.10	
<b>Offsite Total</b>	<b>0.25</b>	<b>6.70</b>	<b>1.42</b>	<b>0.01</b>	<b>305.51</b>	<b>31.12</b>	<b>1160.2</b>
<b>Total</b>	<b>4.17</b>	<b>21.67</b>	<b>31.12</b>	<b>0.06</b>	<b>306.93</b>	<b>32.43</b>	<b>5828.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.10	0.37	0.74	0.00	0.04	0.03	116.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.10</b>	<b>0.37</b>	<b>0.74</b>	<b>0.00</b>	<b>0.04</b>	<b>0.03</b>	<b>116.7</b>
Offsite Motor Vehicle Exhaust	0.01	0.17	0.04	0.00	0.00	0.00	29.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	7.63	0.78	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.17</b>	<b>0.04</b>	<b>0.00</b>	<b>7.64</b>	<b>0.78</b>	<b>29.0</b>
<b>Total</b>	<b>0.10</b>	<b>0.54</b>	<b>0.78</b>	<b>0.00</b>	<b>7.67</b>	<b>0.81</b>	<b>145.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	3	50	6
R/T Crane (L)	350	3	50	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
R/T Crane (L)	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.13	5.67	7.21	0.01	0.60	0.56	844.35	0.10	0.02	853.4
R/T Crane (L)	2.78	9.30	22.49	0.04	0.81	0.75	3778.73	0.25	0.10	3,814.4
<b>Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4623.08</b>	<b>0.35</b>	<b>0.12</b>	<b>4667.80</b>

**Table 65  
Alternative Transmission and Subtransmission Construction Emissions with Segment 9  
TSP Erection**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.03	0.14	0.18	0.00	0.02	0.01	21.11	0.00	0.00	21.3
R/T Crane (L)	0.07	0.23	0.56	0.00	0.02	0.02	94.47	0.01	0.00	95.4
<b>Total</b>	<b>0.10</b>	<b>0.37</b>	<b>0.74</b>	<b>0.00</b>	<b>0.04</b>	<b>0.03</b>	<b>115.58</b>	<b>0.01</b>	<b>0.00</b>	<b>116.69</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	50	N/A	28
1-Ton Truck, 4x4	6	50	N/A	28
Water Truck	1	50	N/A	28
Worker Commute	18	50	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.05	1.32	0.19	0.00	0.02	0.00	193.96	0.01	0.01	196.68
1-Ton Truck, 4x4	0.01	0.06	0.19	0.00	0.03	0.01	125.81	0.00	0.00	127.30



**Table 65  
Alternative Transmission and Subtransmission Construction Emissions with Segment 9  
TSP Erection**

Water Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.25</b>	<b>6.70</b>	<b>1.42</b>	<b>0.01</b>	<b>0.17</b>	<b>0.02</b>	<b>1146.62</b>	<b>0.06</b>	<b>0.04</b>	<b>1160.20</b>
<b>Total</b>	<b>0.25</b>	<b>6.70</b>	<b>1.42</b>	<b>0.01</b>	<b>0.17</b>	<b>0.02</b>	<b>1146.62</b>	<b>0.06</b>	<b>0.04</b>	<b>1160.20</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.03	0.00	0.00	0.00	0.00	4.85	0.00	0.00	4.92
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	3.15	0.00	0.00	3.18
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.48	0.00	0.00	2.50
Worker Commute	0.00	0.13	0.01	0.00	0.00	0.00	18.19	0.00	0.00	18.40
<b>Offsite Total</b>	<b>0.01</b>	<b>0.17</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>28.67</b>	<b>0.00</b>	<b>0.00</b>	<b>29.01</b>
<b>Total</b>	<b>0.01</b>	<b>0.17</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>28.67</b>	<b>0.00</b>	<b>0.00</b>	<b>29.01</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	6	Unpaved	18	50	1.102	0.110	118.99	11.90	2.97	0.30
3/4-Ton Truck, 4x4	6	Paved	10	50	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Truck, 4x4	6	Unpaved	18	50	1.311	0.131	141.54	14.15	3.54	0.35
1-Ton Truck, 4x4	6	Paved	10	50	0.003	0.001	0.20	0.05	0.00	0.00
Water Truck	1	Unpaved	18	50	2.273	0.227	40.91	4.09	1.02	0.10
Water Truck	1	Paved	10	50	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	18	Paved	58	50	0.003	0.001	3.48	0.85	0.09	0.02
<b>Offsite Total</b>							<b>305.34</b>	<b>31.10</b>	<b>7.63</b>	<b>0.78</b>
<b>Total</b>							<b>305.34</b>	<b>31.10</b>	<b>7.63</b>	<b>0.78</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 65**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Erection**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 66**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install Conductor**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	46.32	116.44	206.41	21.16	7.11	6.59	48,424.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>46.32</b>	<b>116.44</b>	<b>206.41</b>	<b>21.16</b>	<b>7.11</b>	<b>6.59</b>	<b>48424.3</b>
Offsite Motor Vehicle Exhaust	1.93	50.27	14.00	0.10	1.31	0.20	8,860.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1064.75	111.26	
<b>Offsite Total</b>	<b>1.93</b>	<b>50.27</b>	<b>14.00</b>	<b>0.10</b>	<b>1066.06</b>	<b>111.46</b>	<b>8860.8</b>
<b>Total</b>	<b>48.26</b>	<b>166.71</b>	<b>220.41</b>	<b>21.27</b>	<b>1073.17</b>	<b>118.06</b>	<b>57285.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	5.20	12.06	22.31	2.53	0.75	0.69	5,209.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>5.20</b>	<b>12.06</b>	<b>22.31</b>	<b>2.53</b>	<b>0.75</b>	<b>0.69</b>	<b>5209.1</b>
Offsite Motor Vehicle Exhaust	0.29	7.52	1.99	0.01	0.19	0.03	1,299.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	141.09	14.82	
<b>Offsite Total</b>	<b>0.29</b>	<b>7.52</b>	<b>1.99</b>	<b>0.01</b>	<b>141.28</b>	<b>14.85</b>	<b>1299.7</b>
<b>Total</b>	<b>5.49</b>	<b>19.58</b>	<b>24.30</b>	<b>2.55</b>	<b>142.03</b>	<b>15.55</b>	<b>6508.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Manlift/Bucket Truck	350	3	300	10
Boom/Crane Truck	350	3	300	10
R/T Crane (M)	215	3	300	10
Sock Line Puller	300	2	80	10
Bull Wheel Puller	350	2	160	10
Static Truck/Tensioner	350	2	300	10
Spacing Cart	10	4	80	10
Backhoe/Front Loader	125	2	60	8
D8 Cat	350	1	60	8
Sag Cat w/ 2 Winches	350	1	60	10
Hughes 500 E Helicopter	420	2	240	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
R/T Crane (M)	215	0.087	0.263	0.752	0.001	0.026	0.024	112.058	0.008	0.003	Cranes

**Table 66**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install Conductor**

Sock Line Puller	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Bull Wheel Puller	350	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Static Truck/Tensioner	350	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Spacing Cart	10	0.012	0.062	0.074	0.000	0.003	0.003	10.098	0.001	0.000	Other Construction Equipment
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
D8 Cat	350	0.218	0.790	1.742	0.003	0.067	0.061	258.997	0.020	0.007	Crawler Tractors
Sag Cat w/ 2 Winches	350	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment
Hughes 500 E Helicopter	420	1.765	2.199	1.421	1.485	0.044	0.044	782.418	0.022	0.025	See note b

a From Table 110

b All except SO<sub>x</sub>, PM<sub>2.5</sub>, CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O from Guidance on the Determination of Helicopter Emissions, Federal Department of the Environment, Transport, Energy and Communications, DETEC, Federal Office of Civil Aviation FOCA, Division Aviation Policy and Strategy, Swiss Confederation, March 2009. Downloaded from <http://www.bazl.admin.ch/experten/regulation/03312/03419/03532/index.html?lang=en>

PM<sub>2.5</sub> emissions assumed equal to PM<sub>10</sub>

SO<sub>x</sub> emissions [lb/hr] = Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] x Fuel sulfur [wt. %] / 100 x 2 [lb SO<sub>2</sub>/lbS]

Fuel use = 112.3 kg/hr from Guidance on the Determination of Helicopter Emissions

Fuel sulfur = 0.3% from ASTM D-1655 for Jet-A

CO<sub>2</sub> emissions [lb/hr] = CO<sub>2</sub> emission factor [kg/gal] x 1000 [g/kg] / 453.6 [g/lb] x Fuel use [kg/hr] x 1000 [g/kg] / 453.6 [g/lb] / Fuel density [lb/gal]

CO<sub>2</sub> emission factor = 9.75 kg/gal from Table 13.1 of 2013 Climate Registry Default Emission Factors, downloaded from

<http://www.theclimateregistry.org/downloads/2013/01/2013-Climate-Registry-Default-Emissions-Factors.pdf>

CH<sub>4</sub> emission factor = 0.27 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

N<sub>2</sub>O emission factor = 0.31 g/gal from Table 13.7 of 2013 Climate Registry Default Emission Factors

Fuel use = 112.3 kg/hr from Guidance on the Determination of Helicopter Emissions

Jet-A density = 6.8 lb/gal

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Manlift/Bucket Truck	2.85	12.29	33.21	0.06	0.99	0.91	6379.95	0.26	0.17	6,436.6
Boom/Crane Truck	3.97	13.28	32.13	0.05	1.16	1.07	5398.19	0.36	0.14	5,449.2
R/T Crane (M)	2.62	7.89	22.57	0.04	0.78	0.71	3361.74	0.24	0.09	3,393.8
Sock Line Puller	2.48	9.73	20.80	0.05	0.70	0.64	5080.20	0.22	0.13	5,125.8
Bull Wheel Puller	2.48	9.73	20.80	0.05	0.70	0.64	5080.20	0.22	0.13	5,125.8
Static Truck/Tensioner	2.48	9.73	20.80	0.05	0.70	0.64	5080.20	0.22	0.13	5,125.8
Spacing Cart	0.47	2.47	2.94	0.01	0.12	0.11	403.93	0.04	0.01	408.1
Backhoe/Front Loader	1.26	9.35	8.91	0.02	0.47	0.43	1620.73	0.11	0.04	1,636.2
D8 Cat	1.74	6.32	13.93	0.02	0.53	0.49	2071.97	0.16	0.05	2,092.0
Sag Cat w/ 2 Winches	1.24	4.86	10.40	0.02	0.35	0.32	2540.10	0.11	0.07	2,562.9
Hughes 500 E Helicopter	24.72	30.78	19.90	20.79	0.62	0.62	10953.86	0.30	0.35	11,068.2
<b>Total</b>	<b>46.32</b>	<b>116.44</b>	<b>206.41</b>	<b>21.16</b>	<b>7.11</b>	<b>6.59</b>	<b>47971.08</b>	<b>2.25</b>	<b>1.31</b>	<b>48424.31</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Manlift/Bucket Truck	0.43	1.84	4.98	0.01	0.15	0.14	956.99	0.04	0.02	965.5
Boom/Crane Truck	0.60	1.99	4.82	0.01	0.17	0.16	809.73	0.05	0.02	817.4
R/T Crane (M)	0.39	1.18	3.39	0.01	0.12	0.11	504.26	0.04	0.01	509.1

**Table 66**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install Conductor**

Sock Line Puller	0.10	0.39	0.83	0.00	0.03	0.03	203.21	0.01	0.01	205.0
Bull Wheel Puller	0.20	0.78	1.66	0.00	0.06	0.05	406.42	0.02	0.01	410.1
Static Truck/Tensioner	0.37	1.46	3.12	0.01	0.10	0.10	762.03	0.03	0.02	768.9
Spacing Cart	0.02	0.10	0.12	0.00	0.00	0.00	16.16	0.00	0.00	16.3
Backhoe/Front Loader	0.04	0.28	0.27	0.00	0.01	0.01	48.62	0.00	0.00	49.1
D8 Cat	0.05	0.19	0.42	0.00	0.02	0.01	62.16	0.00	0.00	62.8
Sag Cat w/ 2 Winches	0.04	0.15	0.31	0.00	0.01	0.01	76.20	0.00	0.00	76.9
Hughes 500 E Helicopter	2.97	3.69	2.39	2.50	0.07	0.07	1314.46	0.04	0.04	1,328.2
<b>Total</b>	<b>5.20</b>	<b>12.06</b>	<b>22.31</b>	<b>2.53</b>	<b>0.75</b>	<b>0.69</b>	<b>5160.24</b>	<b>0.24</b>	<b>0.14</b>	<b>5209.14</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	3	300	N/A	28
1-Ton Truck, 4x4	6	300	N/A	28
Manlift/Bucket Truck	3	300	N/A	28
Boom/Crane Truck	3	300	N/A	28
Dump Truck	2	300	N/A	28
Wire Truck/Trailer	3	206	N/A	28
Static Truck/Tensioner	2	300	N/A	28
Splicing Rig	2	80	N/A	28
Splicing Lab	2	80	N/A	28
Lowboy Truck/Trailer	3	300	N/A	28
Fuel, Helicopter Support Truck	2	240	N/A	28
Worker Commute	165	300	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Wire Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Static Truck/Tensioner	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Splicing Rig	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04

**Table 66**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install Conductor**

Fuel, Helicopter Support Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.66	0.10	0.00	0.01	0.00	96.98	0.01	0.00	98.34
1-Ton Truck, 4x4	0.01	0.06	0.19	0.00	0.03	0.01	125.81	0.00	0.00	127.30
Manlift/Bucket Truck	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Boom/Crane Truck	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Dump Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Wire Truck/Trailer	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Static Truck/Tensioner	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Splicing Rig	0.00	0.02	0.06	0.00	0.01	0.00	41.94	0.00	0.00	42.43
Splicing Lab	0.00	0.02	0.06	0.00	0.01	0.00	41.94	0.00	0.00	42.43
Lowboy Truck/Trailer	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Fuel, Helicopter Support Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Worker Commute	1.68	48.07	5.24	0.08	0.99	0.04	6670.84	0.41	0.22	6746.98
<b>Offsite Total</b>	<b>1.93</b>	<b>50.27</b>	<b>14.00</b>	<b>0.10</b>	<b>1.31</b>	<b>0.20</b>	<b>8761.78</b>	<b>0.42</b>	<b>0.29</b>	<b>8860.84</b>
<b>Total</b>	<b>1.93</b>	<b>50.27</b>	<b>14.00</b>	<b>0.10</b>	<b>1.31</b>	<b>0.20</b>	<b>8761.78</b>	<b>0.42</b>	<b>0.29</b>	<b>8860.84</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.10	0.01	0.00	0.00	0.00	14.55	0.00	0.00	14.75
1-Ton Truck, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	18.87	0.00	0.00	19.10
Manlift/Bucket Truck	0.01	0.04	0.21	0.00	0.01	0.00	44.61	0.00	0.00	45.08
Boom/Crane Truck	0.01	0.04	0.21	0.00	0.01	0.00	44.61	0.00	0.00	45.08
Dump Truck	0.00	0.02	0.14	0.00	0.00	0.00	29.74	0.00	0.00	30.06
Wire Truck/Trailer	0.00	0.02	0.14	0.00	0.00	0.00	30.63	0.00	0.00	30.96
Static Truck/Tensioner	0.00	0.02	0.14	0.00	0.00	0.00	29.74	0.00	0.00	30.06
Splicing Rig	0.00	0.00	0.00	0.00	0.00	0.00	1.68	0.00	0.00	1.70
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	1.68	0.00	0.00	1.70
Lowboy Truck/Trailer	0.01	0.04	0.21	0.00	0.01	0.00	44.61	0.00	0.00	45.08
Fuel, Helicopter Support Truck	0.00	0.02	0.11	0.00	0.00	0.00	23.79	0.00	0.00	24.04
Worker Commute	0.25	7.21	0.79	0.01	0.15	0.01	1000.63	0.06	0.03	1012.05

**Table 66**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install Conductor**

<b>Offsite Total</b>	<b>0.29</b>	<b>7.52</b>	<b>1.99</b>	<b>0.01</b>	<b>0.19</b>	<b>0.03</b>	<b>1285.12</b>	<b>0.06</b>	<b>0.04</b>	<b>1299.65</b>
<b>Total</b>	<b>0.29</b>	<b>7.52</b>	<b>1.99</b>	<b>0.01</b>	<b>0.19</b>	<b>0.03</b>	<b>1285.12</b>	<b>0.06</b>	<b>0.04</b>	<b>1299.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	3	Unpaved	18	300	1.102	0.110	59.49	5.95	8.92	0.89
3/4-Ton Truck, 4x4	3	Paved	10	300	0.003	0.001	0.10	0.02	0.01	0.00
1-Ton Truck, 4x4	6	Unpaved	18	300	1.311	0.131	141.54	14.15	21.23	2.12
1-Ton Truck, 4x4	6	Paved	10	300	0.003	0.001	0.20	0.05	0.03	0.01
Manlift/Bucket Truck	3	Unpaved	18	300	2.273	0.227	122.74	12.27	18.41	1.84
Manlift/Bucket Truck	3	Paved	10	300	0.003	0.001	0.10	0.02	0.01	0.00
Boom/Crane Truck	3	Unpaved	18	300	2.273	0.227	122.74	12.27	18.41	1.84
Boom/Crane Truck	3	Paved	10	300	0.003	0.001	0.10	0.02	0.01	0.00
Dump Truck	2	Unpaved	18	300	2.273	0.227	81.83	8.18	12.27	1.23
Dump Truck	2	Paved	10	300	0.003	0.001	0.07	0.02	0.01	0.00
Wire Truck/Trailer	3	Unpaved	18	206	2.273	0.227	122.74	12.27	12.64	1.26
Wire Truck/Trailer	3	Paved	10	206	0.003	0.001	0.10	0.02	0.01	0.00
Static Truck/Tensioner	2	Unpaved	18	300	2.273	0.227	81.83	8.18	12.27	1.23
Static Truck/Tensioner	2	Paved	10	300	0.003	0.001	0.07	0.02	0.01	0.00
Splicing Rig	2	Unpaved	18	80	1.311	0.131	47.18	4.72	1.89	0.19
Splicing Rig	2	Paved	10	80	0.003	0.001	0.07	0.02	0.00	0.00
Splicing Lab	2	Unpaved	18	80	1.311	0.131	47.18	4.72	1.89	0.19
Splicing Lab	2	Paved	10	80	0.003	0.001	0.07	0.02	0.00	0.00
Lowboy Truck/Trailer	3	Unpaved	18	300	2.273	0.227	122.74	12.27	18.41	1.84
Lowboy Truck/Trailer	3	Paved	10	300	0.003	0.001	0.10	0.02	0.01	0.00
Fuel, Helicopter Support Truck	2	Unpaved	18	240	2.273	0.227	81.83	8.18	9.82	0.98
Fuel, Helicopter Support Truck	2	Paved	10	240	0.003	0.001	0.07	0.02	0.01	0.00
Worker Commute	165	Paved	58	300	0.003	0.001	31.87	7.82	4.78	1.17
<b>Offsite Total</b>							<b>1064.75</b>	<b>111.26</b>	<b>141.09</b>	<b>14.82</b>
<b>Total</b>							<b>1064.75</b>	<b>111.26</b>	<b>141.09</b>	<b>14.82</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 66**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install Conductor**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 67**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Guard Structure Removal**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	10.72	43.55	87.42	0.14	4.09	3.76	14,211.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>10.72</b>	<b>43.55</b>	<b>87.42</b>	<b>0.14</b>	<b>4.09</b>	<b>3.76</b>	<b>14211.6</b>
Offsite Motor Vehicle Exhaust	0.53	12.43	6.03	0.03	0.36	0.09	2,665.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1089.59	109.80	
<b>Offsite Total</b>	<b>0.53</b>	<b>12.43</b>	<b>6.03</b>	<b>0.03</b>	<b>1089.96</b>	<b>109.89</b>	<b>2665.6</b>
<b>Total</b>	<b>11.25</b>	<b>55.97</b>	<b>93.46</b>	<b>0.17</b>	<b>1094.04</b>	<b>113.65</b>	<b>16877.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.06	0.26	0.52	0.00	0.02	0.02	85.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.06</b>	<b>0.26</b>	<b>0.52</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>85.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.07	0.04	0.00	0.00	0.00	16.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	6.54	0.66	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.07</b>	<b>0.04</b>	<b>0.00</b>	<b>6.54</b>	<b>0.66</b>	<b>16.0</b>
<b>Total</b>	<b>0.07</b>	<b>0.34</b>	<b>0.56</b>	<b>0.00</b>	<b>6.56</b>	<b>0.68</b>	<b>101.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	8	12	7
Manlift/Bucket Truck	350	4	12	5
Boom/Crane Truck	500	4	12	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Manlift/Bucket Truck	350	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	500	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	3.53	17.64	22.44	0.03	1.88	1.73	2626.85	0.32	0.07	2,654.9
Manlift/Bucket Truck	1.90	8.19	22.14	0.04	0.66	0.61	4253.30	0.17	0.11	4,291.1
Boom/Crane Truck	5.29	17.71	42.84	0.07	1.55	1.42	7197.58	0.48	0.19	7,265.6

**Table 67**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Guard Structure Removal**

<b>Total</b>	<b>10.72</b>	<b>43.55</b>	<b>87.42</b>	<b>0.14</b>	<b>4.09</b>	<b>3.76</b>	<b>14077.73</b>	<b>0.97</b>	<b>0.37</b>	<b>14211.58</b>
--------------	--------------	--------------	--------------	-------------	-------------	-------------	-----------------	-------------	-------------	-----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.02	0.11	0.13	0.00	0.01	0.01	15.76	0.00	0.00	15.9
Manlift/Bucket Truck	0.01	0.05	0.13	0.00	0.00	0.00	25.52	0.00	0.00	25.7
Boom/Crane Truck	0.03	0.11	0.26	0.00	0.01	0.01	43.19	0.00	0.00	43.6
<b>Total</b>	<b>0.06</b>	<b>0.26</b>	<b>0.52</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>84.47</b>	<b>0.01</b>	<b>0.00</b>	<b>85.27</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	8	12	N/A	28
1-Ton Truck, 4x4	8	12	N/A	28
Water Truck	2	12	N/A	28
Manlift/Bucket Truck	4	12	N/A	28
Boom/Crane Truck	4	12	N/A	28
Extendable Flat Bed Pole Truck	8	12	N/A	28
Worker Commute	24	12	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										

**Table 67**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Guard Structure Removal**

None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>											
3/4-Ton Truck, 4x4	0.06	1.76	0.26	0.00	0.02	0.00	258.61	0.02	0.01		262.24
1-Ton Truck, 4x4	0.06	1.76	0.26	0.00	0.02	0.00	258.61	0.02	0.01		262.24
Water Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01		200.37
Manlift/Bucket Truck	0.05	0.32	1.85	0.00	0.06	0.03	396.51	0.00	0.01		400.74
Boom/Crane Truck	0.05	0.32	1.85	0.00	0.06	0.03	396.51	0.00	0.01		400.74
Extendable Flat Bed Pole Truck	0.04	1.13	0.12	0.00	0.02	0.00	156.14	0.01	0.01		157.92
Worker Commute	0.24	6.99	0.76	0.01	0.14	0.01	970.30	0.06	0.03		981.38
<b>Offsite Total</b>	<b>0.53</b>	<b>12.43</b>	<b>6.03</b>	<b>0.03</b>	<b>0.36</b>	<b>0.09</b>	<b>2634.93</b>	<b>0.11</b>	<b>0.09</b>		<b>2665.65</b>
<b>Total</b>	<b>0.53</b>	<b>12.43</b>	<b>6.03</b>	<b>0.03</b>	<b>0.36</b>	<b>0.09</b>	<b>2634.93</b>	<b>0.11</b>	<b>0.09</b>		<b>2665.65</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.01	0.00	0.00	0.00	0.00	1.55	0.00	0.00	1.57
1-Ton Truck, 4x4	0.00	0.01	0.00	0.00	0.00	0.00	1.55	0.00	0.00	1.57
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.19	0.00	0.00	1.20
Manlift/Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.38	0.00	0.00	2.40
Boom/Crane Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.38	0.00	0.00	2.40
Extendable Flat Bed Pole Truck	0.00	0.01	0.00	0.00	0.00	0.00	0.94	0.00	0.00	0.95
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.82	0.00	0.00	5.89
<b>Offsite Total</b>	<b>0.00</b>	<b>0.07</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>15.81</b>	<b>0.00</b>	<b>0.00</b>	<b>15.99</b>
<b>Total</b>	<b>0.00</b>	<b>0.07</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>15.81</b>	<b>0.00</b>	<b>0.00</b>	<b>15.99</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	8	Unpaved	18	12	1.102	0.110	158.65	15.86	0.95	0.10
3/4-Ton Truck, 4x4	8	Paved	10	12	0.003	0.001	0.27	0.07	0.00	0.00
1-Ton Truck, 4x4	8	Unpaved	18	12	1.311	0.131	188.71	18.87	1.13	0.11
1-Ton Truck, 4x4	8	Paved	10	12	0.003	0.001	0.27	0.07	0.00	0.00

**Table 67**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Guard Structure Removal**

Water Truck	2	Unpaved	18	12	2.273	0.227	81.83	8.18	0.49	0.05
Water Truck	2	Paved	10	12	0.003	0.001	0.07	0.02	0.00	0.00
Manlift/Bucket Truck	4	Unpaved	18	12	2.273	0.227	163.66	16.37	0.98	0.10
Manlift/Bucket Truck	4	Paved	10	12	0.003	0.001	0.13	0.03	0.00	0.00
Boom/Crane Truck	4	Unpaved	18	12	2.273	0.227	163.66	16.37	0.98	0.10
Boom/Crane Truck	4	Paved	10	12	0.003	0.001	0.13	0.03	0.00	0.00
Extendable Flat Bed Pole Truck	8	Unpaved	18	12	2.273	0.227	327.32	32.73	1.96	0.20
Extendable Flat Bed Pole Truck	8	Paved	10	12	0.003	0.001	0.27	0.07	0.00	0.00
Worker Commute	24	Paved	58	12	0.003	0.001	4.63	1.14	0.03	0.01
<b>Offsite Total</b>							<b>1089.59</b>	<b>109.80</b>	<b>6.54</b>	<b>0.66</b>
<b>Total</b>							<b>1089.59</b>	<b>109.80</b>	<b>6.54</b>	<b>0.66</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 68**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**115 kV Pole Removal**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.13	8.39	19.43	0.03	0.74	0.68	3,406.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.13</b>	<b>8.39</b>	<b>19.43</b>	<b>0.03</b>	<b>0.74</b>	<b>0.68</b>	<b>3406.6</b>
Offsite Motor Vehicle Exhaust	0.09	2.07	1.20	0.01	0.08	0.02	507.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	171.25	17.32	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.07</b>	<b>1.20</b>	<b>0.01</b>	<b>171.33</b>	<b>17.34</b>	<b>507.9</b>
<b>Total</b>	<b>2.23</b>	<b>10.46</b>	<b>20.62</b>	<b>0.04</b>	<b>172.07</b>	<b>18.02</b>	<b>3914.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.03	0.08	0.00	0.00	0.00	13.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>13.6</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	2.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.68	0.07	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.69</b>	<b>0.07</b>	<b>2.0</b>
<b>Total</b>	<b>0.01</b>	<b>0.04</b>	<b>0.08</b>	<b>0.00</b>	<b>0.69</b>	<b>0.07</b>	<b>15.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	1	8	5
Manlift/Bucket Truck	250	1	8	8
Boom/Crane Truck	350	1	8	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Manlift/Bucket Truck	250	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	0.31	1.58	2.00	0.00	0.17	0.15	234.54	0.03	0.01	237.0
Manlift/Bucket Truck	0.76	3.28	8.86	0.02	0.26	0.24	1701.32	0.07	0.04	1,716.4
Boom/Crane Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1

**Table 68**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**115 kV Pole Removal**

<b>Total</b>	<b>2.13</b>	<b>8.39</b>	<b>19.43</b>	<b>0.03</b>	<b>0.74</b>	<b>0.68</b>	<b>3375.38</b>	<b>0.19</b>	<b>0.09</b>	<b>3406.60</b>
--------------	-------------	-------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.00	0.01	0.01	0.00	0.00	0.00	0.94	0.00	0.00	0.9
Manlift/Bucket Truck	0.00	0.01	0.04	0.00	0.00	0.00	6.81	0.00	0.00	6.9
Boom/Crane Truck	0.00	0.01	0.03	0.00	0.00	0.00	5.76	0.00	0.00	5.8
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>13.50</b>	<b>0.00</b>	<b>0.00</b>	<b>13.63</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	8	N/A	28
Manlift/Bucket Truck	1	8	N/A	28
Boom/Crane Truck	1	8	N/A	28
Flat Bed Pole Truck	1	8	N/A	28
Worker Commute	6	8	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	41.94	0.00	0.00	42.43

**Table 68**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**115 kV Pole Removal**

Manlift/Bucket Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Boom/Crane Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Flat Bed Pole Truck	0.00	0.14	0.02	0.00	0.00	0.00	19.52	0.00	0.00	19.74
Worker Commute	0.06	1.75	0.19	0.00	0.04	0.00	242.58	0.01	0.01	245.34
<b>Offsite Total</b>	<b>0.09</b>	<b>2.07</b>	<b>1.20</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>502.28</b>	<b>0.02</b>	<b>0.02</b>	<b>507.89</b>
<b>Total</b>	<b>0.09</b>	<b>2.07</b>	<b>1.20</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>502.28</b>	<b>0.02</b>	<b>0.02</b>	<b>507.89</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.17
Manlift/Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.40
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.40
Flat Bed Pole Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.08
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	0.97	0.00	0.00	0.98
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.01</b>	<b>0.00</b>	<b>0.00</b>	<b>2.03</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.01</b>	<b>0.00</b>	<b>0.00</b>	<b>2.03</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	2	Unpaved	18	8	1.311	0.131	47.18	4.72	0.19	0.02
1-Ton Truck, 4x4	2	Paved	10	8	0.003	0.001	0.07	0.02	0.00	0.00
Manlift/Bucket Truck	1	Unpaved	18	8	2.273	0.227	40.91	4.09	0.16	0.02
Manlift/Bucket Truck	1	Paved	10	8	0.003	0.001	0.03	0.01	0.00	0.00
Boom/Crane Truck	1	Unpaved	18	8	2.273	0.227	40.91	4.09	0.16	0.02
Boom/Crane Truck	1	Paved	10	8	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Pole Truck	1	Unpaved	18	8	2.273	0.227	40.91	4.09	0.16	0.02
Flat Bed Pole Truck	1	Paved	10	8	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	6	Paved	58	8	0.003	0.001	1.16	0.28	0.00	0.00
<b>Offsite Total</b>							<b>171.25</b>	<b>17.32</b>	<b>0.68</b>	<b>0.07</b>
<b>Total</b>							<b>171.25</b>	<b>17.32</b>	<b>0.68</b>	<b>0.07</b>

<sup>a</sup> From Table 111

**Table 68**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**115 kV Pole Removal**

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 69**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install TSP Riser Foundations**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.98	12.14	21.65	0.06	0.72	0.66	6,140.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	9.84	1.49	
<b>Onsite Total</b>	<b>2.98</b>	<b>12.14</b>	<b>21.65</b>	<b>0.06</b>	<b>10.55</b>	<b>2.15</b>	<b>6140.3</b>
Offsite Motor Vehicle Exhaust	0.59	7.12	17.70	0.04	0.65	0.32	4,310.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	882.47	88.93	
<b>Offsite Total</b>	<b>0.59</b>	<b>7.12</b>	<b>17.70</b>	<b>0.04</b>	<b>883.11</b>	<b>89.24</b>	<b>4310.2</b>
<b>Total</b>	<b>3.57</b>	<b>19.25</b>	<b>39.35</b>	<b>0.11</b>	<b>893.66</b>	<b>91.39</b>	<b>10450.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.07	0.26	0.49	0.00	0.02	0.02	130.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.06	0.01	
<b>Onsite Total</b>	<b>0.07</b>	<b>0.26</b>	<b>0.49</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>130.0</b>
Offsite Motor Vehicle Exhaust	0.01	0.16	0.33	0.00	0.01	0.01	82.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	17.14	1.73	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.33</b>	<b>0.00</b>	<b>17.15</b>	<b>1.73</b>	<b>82.9</b>
<b>Total</b>	<b>0.08</b>	<b>0.42</b>	<b>0.82</b>	<b>0.00</b>	<b>17.22</b>	<b>1.76</b>	<b>212.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	1	50	7
Backhoe/Front Loader	200	1	50	10
Auger Truck	500	1	35	10

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes
Auger Truck	500	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	0.93	3.10	7.50	0.01	0.27	0.25	1259.58	0.08	0.03	1,271.5
Backhoe/Front Loader	1.02	3.53	7.90	0.02	0.26	0.24	1715.83	0.09	0.04	1,731.6
Auger Truck	1.03	5.51	6.25	0.03	0.19	0.17	3110.29	0.09	0.08	3,137.2

**Table 69**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install TSP Riser Foundations**

<b>Total</b>	<b>2.98</b>	<b>12.14</b>	<b>21.65</b>	<b>0.06</b>	<b>0.72</b>	<b>0.66</b>	<b>6085.70</b>	<b>0.27</b>	<b>0.16</b>	<b>6140.29</b>
--------------	-------------	--------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.02	0.08	0.19	0.00	0.01	0.01	31.49	0.00	0.00	31.8
Backhoe/Front Loader	0.03	0.09	0.20	0.00	0.01	0.01	42.90	0.00	0.00	43.3
Auger Truck	0.02	0.10	0.11	0.00	0.00	0.00	54.43	0.00	0.00	54.9
<b>Total</b>	<b>0.07</b>	<b>0.26</b>	<b>0.49</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>128.82</b>	<b>0.01</b>	<b>0.00</b>	<b>129.98</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	3	50	N/A	28
Boom/Crane Truck	1	50	N/A	28
Auger Truck	1	35	N/A	28
Water Truck	1	50	N/A	28
Dump Truck	2	50	N/A	28
Concrete Mixer Truck	15	35	N/A	60
Worker Commute	12	50	N/A	58

<sup>a</sup> Concrete mixer trucks based 1 TSP/day, on 148 CY/TSP and 10 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Auger Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

**Table 69**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install TSP Riser Foundations**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.66	0.10	0.00	0.01	0.00	96.98	0.01	0.00	98.34
Boom/Crane Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Auger Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Water Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Dump Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Concrete Mixer Truck	0.38	2.56	14.91	0.03	0.49	0.27	3186.23	0.02	0.11	3220.27
Worker Commute	0.12	3.50	0.38	0.01	0.07	0.00	485.15	0.03	0.02	490.69
<b>Offsite Total</b>	<b>0.59</b>	<b>7.12</b>	<b>17.70</b>	<b>0.04</b>	<b>0.65</b>	<b>0.32</b>	<b>4263.99</b>	<b>0.06</b>	<b>0.15</b>	<b>4310.23</b>
<b>Total</b>	<b>0.59</b>	<b>7.12</b>	<b>17.70</b>	<b>0.04</b>	<b>0.65</b>	<b>0.32</b>	<b>4263.99</b>	<b>0.06</b>	<b>0.15</b>	<b>4310.23</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	2.42	0.00	0.00	2.46
Boom/Crane Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.48	0.00	0.00	2.50
Auger Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.73	0.00	0.00	1.75
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.48	0.00	0.00	2.50
Dump Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.96	0.00	0.00	5.01
Concrete Mixer Truck	0.01	0.04	0.26	0.00	0.01	0.00	55.76	0.00	0.00	56.35
Worker Commute	0.00	0.09	0.01	0.00	0.00	0.00	12.13	0.00	0.00	12.27
<b>Offsite Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.33</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>81.96</b>	<b>0.00</b>	<b>0.00</b>	<b>82.85</b>
<b>Total</b>	<b>0.01</b>	<b>0.16</b>	<b>0.33</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>81.96</b>	<b>0.00</b>	<b>0.00</b>	<b>82.85</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	3	Unpaved	18	50	1.102	0.110	59.49	5.95	1.49	0.15

**Table 69**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install TSP Riser Foundations**

3/4-Ton Truck, 4x4	3	Paved	10	50	0.003	0.001	0.10	0.02	0.00	0.00
Boom/Crane Truck	1	Unpaved	18	50	2.273	0.227	40.91	4.09	1.02	0.10
Boom/Crane Truck	1	Paved	10	50	0.003	0.001	0.03	0.01	0.00	0.00
Auger Truck	1	Unpaved	18	35	2.273	0.227	40.91	4.09	0.72	0.07
Auger Truck	1	Paved	10	35	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	18	50	2.273	0.227	40.91	4.09	1.02	0.10
Water Truck	1	Paved	10	50	0.003	0.001	0.03	0.01	0.00	0.00
Dump Truck	2	Unpaved	18	50	2.273	0.227	81.83	8.18	2.05	0.20
Dump Truck	2	Paved	10	50	0.003	0.001	0.07	0.02	0.00	0.00
Concrete Mixer Truck	15	Unpaved	18	35	2.273	0.227	613.72	61.37	10.74	1.07
Concrete Mixer Truck	15	Paved	42	35	0.003	0.001	2.10	0.51	0.04	0.01
Worker Commute	12	Paved	58	50	0.003	0.001	2.32	0.57	0.06	0.01
<b>Offsite Total</b>							<b>882.47</b>	<b>88.93</b>	<b>17.14</b>	<b>1.73</b>
<b>Total</b>							<b>882.47</b>	<b>88.93</b>	<b>17.14</b>	<b>1.73</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	148	1770	6.65E-02	1.01E-02	9.84	1.49	0.06	0.01
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>9.84</b>	<b>1.49</b>	<b>0.06</b>	<b>0.01</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Daily based on 1 TSP, 13 ft. diameter x 30 ft. deep; total based on 12 TSPs

**Table 70**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Riser Haul**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.06	3.54	8.57	0.01	0.31	0.28	1,453.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.06</b>	<b>3.54</b>	<b>8.57</b>	<b>0.01</b>	<b>0.31</b>	<b>0.28</b>	<b>1453.1</b>
Offsite Motor Vehicle Exhaust	0.10	1.92	2.05	0.01	0.09	0.03	629.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	204.29	20.57	
<b>Offsite Total</b>	<b>0.10</b>	<b>1.92</b>	<b>2.05</b>	<b>0.01</b>	<b>204.38</b>	<b>20.61</b>	<b>629.9</b>
<b>Total</b>	<b>1.16</b>	<b>5.47</b>	<b>10.61</b>	<b>0.02</b>	<b>204.69</b>	<b>20.89</b>	<b>2083.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	5.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.8</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.82	0.08	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.82</b>	<b>0.08</b>	<b>2.5</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.82</b>	<b>0.08</b>	<b>8.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Boom/Crane Truck	350	1	8	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

<sup>a</sup> From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Boom/Crane Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
<b>Total</b>	<b>1.06</b>	<b>3.54</b>	<b>8.57</b>	<b>0.01</b>	<b>0.31</b>	<b>0.28</b>	<b>1439.52</b>	<b>0.10</b>	<b>0.04</b>	<b>1453.12</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 70**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Riser Haul**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Boom/Crane Truck	0.00	0.01	0.03	0.00	0.00	0.00	5.76	0.00	0.00	5.8
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.76</b>	<b>0.00</b>	<b>0.00</b>	<b>5.81</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	2	8	N/A	28
Water Truck	1	8	N/A	28
Boom/Crane Truck	1	8	N/A	28
Flat Bed Pole Truck	2	8	N/A	28
Worker Commute	4	8	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Pole Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.02	0.44	0.06	0.00	0.01	0.00	64.65	0.00	0.00	65.56
Water Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Boom/Crane Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Flat Bed Pole Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.10</b>	<b>1.92</b>	<b>2.05</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>622.88</b>	<b>0.02</b>	<b>0.02</b>	<b>629.87</b>
<b>Total</b>	<b>0.10</b>	<b>1.92</b>	<b>2.05</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>	<b>622.88</b>	<b>0.02</b>	<b>0.02</b>	<b>629.87</b>

**Table 70**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Riser Haul**

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.26
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.40
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.40
Flat Bed Pole Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.79	0.00	0.00	0.80
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.65
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.49</b>	<b>0.00</b>	<b>0.00</b>	<b>2.52</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.49</b>	<b>0.00</b>	<b>0.00</b>	<b>2.52</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	2	Unpaved	18	8	1.102	0.110	39.66	3.97	0.16	0.02
3/4-Ton Truck, 4x4	2	Paved	10	8	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	1	Unpaved	18	8	2.273	0.227	40.91	4.09	0.16	0.02
Water Truck	1	Paved	10	8	0.003	0.001	0.03	0.01	0.00	0.00
Boom/Crane Truck	1	Unpaved	18	8	2.273	0.227	40.91	4.09	0.16	0.02
Boom/Crane Truck	1	Paved	10	8	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Pole Truck	2	Unpaved	18	8	2.273	0.227	81.83	8.18	0.33	0.03
Flat Bed Pole Truck	2	Paved	10	8	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	8	0.003	0.001	0.77	0.19	0.00	0.00
<b>Offsite Total</b>							<b>204.29</b>	<b>20.57</b>	<b>0.82</b>	<b>0.08</b>
<b>Total</b>							<b>204.29</b>	<b>20.57</b>	<b>0.82</b>	<b>0.08</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 70**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Riser Haul**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 71  
Alternative Transmission and Subtransmission Construction Emissions with Segment 9  
TSP Riser Assembly**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.91	14.97	29.71	0.05	1.42	1.30	4,667.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4667.8</b>
Offsite Motor Vehicle Exhaust	0.29	6.94	2.81	0.02	0.21	0.05	1,460.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	428.19	43.40	
<b>Offsite Total</b>	<b>0.29</b>	<b>6.94</b>	<b>2.81</b>	<b>0.02</b>	<b>428.40</b>	<b>43.45</b>	<b>1460.8</b>
<b>Total</b>	<b>4.20</b>	<b>21.91</b>	<b>32.51</b>	<b>0.06</b>	<b>429.82</b>	<b>44.75</b>	<b>6128.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.05	0.19	0.37	0.00	0.02	0.02	58.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.05</b>	<b>0.19</b>	<b>0.37</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>58.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.09	0.04	0.00	0.00	0.00	18.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	5.35	0.54	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.04</b>	<b>0.00</b>	<b>5.35</b>	<b>0.54</b>	<b>18.3</b>
<b>Total</b>	<b>0.05</b>	<b>0.27</b>	<b>0.41</b>	<b>0.00</b>	<b>5.37</b>	<b>0.56</b>	<b>76.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	3	25	6
Boom/Crane Truck	350	3	25	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.13	5.67	7.21	0.01	0.60	0.56	844.35	0.10	0.02	853.4
Boom/Crane Truck	2.78	9.30	22.49	0.04	0.81	0.75	3778.73	0.25	0.10	3,814.4
<b>Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4623.08</b>	<b>0.35</b>	<b>0.12</b>	<b>4667.80</b>

**Table 71**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Riser Assembly**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.01	0.07	0.09	0.00	0.01	0.01	10.55	0.00	0.00	10.7
Boom/Crane Truck	0.03	0.12	0.28	0.00	0.01	0.01	47.23	0.00	0.00	47.7
<b>Total</b>	<b>0.05</b>	<b>0.19</b>	<b>0.37</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>57.79</b>	<b>0.00</b>	<b>0.00</b>	<b>58.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	25	N/A	28
1-Ton Truck, 4x4	6	25	N/A	28
Water Truck	1	25	N/A	28
Boom/Crane Truck	3	25	N/A	28
Worker Commute	18	25	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 71**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Riser Assembly**

3/4-Ton Truck, 4x4	0.05	1.32	0.19	0.00	0.02	0.00	193.96	0.01	0.01	196.68
1-Ton Truck, 4x4	0.01	0.06	0.19	0.00	0.03	0.01	125.81	0.00	0.00	127.30
Water Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Boom/Crane Truck	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.29</b>	<b>6.94</b>	<b>2.81</b>	<b>0.02</b>	<b>0.21</b>	<b>0.05</b>	<b>1444.00</b>	<b>0.06</b>	<b>0.05</b>	<b>1460.76</b>
<b>Total</b>	<b>0.29</b>	<b>6.94</b>	<b>2.81</b>	<b>0.02</b>	<b>0.21</b>	<b>0.05</b>	<b>1444.00</b>	<b>0.06</b>	<b>0.05</b>	<b>1460.76</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	2.42	0.00	0.00	2.46
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.59
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.24	0.00	0.00	1.25
Boom/Crane Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.72	0.00	0.00	3.76
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.10	0.00	0.00	9.20
<b>Offsite Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>18.05</b>	<b>0.00</b>	<b>0.00</b>	<b>18.26</b>
<b>Total</b>	<b>0.00</b>	<b>0.09</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>18.05</b>	<b>0.00</b>	<b>0.00</b>	<b>18.26</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	6	Unpaved	18	25	1.102	0.110	118.99	11.90	1.49	0.15
3/4-Ton Truck, 4x4	6	Paved	10	25	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Truck, 4x4	6	Unpaved	18	25	1.311	0.131	141.54	14.15	1.77	0.18
1-Ton Truck, 4x4	6	Paved	10	25	0.003	0.001	0.20	0.05	0.00	0.00
Water Truck	1	Unpaved	18	25	2.273	0.227	40.91	4.09	0.51	0.05
Water Truck	1	Paved	10	25	0.003	0.001	0.03	0.01	0.00	0.00
Boom/Crane Truck	3	Unpaved	18	25	2.273	0.227	122.74	12.27	1.53	0.15
Boom/Crane Truck	3	Paved	10	25	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	18	Paved	58	25	0.003	0.001	3.48	0.85	0.04	0.01

**Table 71**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Riser Assembly**

<b>Offsite Total</b>							<b>428.19</b>	<b>43.40</b>	<b>5.35</b>	<b>0.54</b>
<b>Total</b>							<b>428.19</b>	<b>43.40</b>	<b>5.35</b>	<b>0.54</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 72**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Riser Erection**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.91	14.97	29.71	0.05	1.42	1.30	4,667.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4667.8</b>
Offsite Motor Vehicle Exhaust	0.25	6.70	1.42	0.01	0.17	0.02	1,160.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	305.34	31.10	
<b>Offsite Total</b>	<b>0.25</b>	<b>6.70</b>	<b>1.42</b>	<b>0.01</b>	<b>305.51</b>	<b>31.12</b>	<b>1160.2</b>
<b>Total</b>	<b>4.17</b>	<b>21.67</b>	<b>31.12</b>	<b>0.06</b>	<b>306.93</b>	<b>32.43</b>	<b>5828.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.05	0.19	0.37	0.00	0.02	0.02	58.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.05</b>	<b>0.19</b>	<b>0.37</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>58.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.02	0.00	0.00	0.00	14.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	3.82	0.39	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>0.00</b>	<b>3.82</b>	<b>0.39</b>	<b>14.5</b>
<b>Total</b>	<b>0.05</b>	<b>0.27</b>	<b>0.39</b>	<b>0.00</b>	<b>3.84</b>	<b>0.41</b>	<b>72.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	3	25	6
R/T Crane (L)	350	3	25	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
R/T Crane (L)	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	1.13	5.67	7.21	0.01	0.60	0.56	844.35	0.10	0.02	853.4
R/T Crane (L)	2.78	9.30	22.49	0.04	0.81	0.75	3778.73	0.25	0.10	3,814.4
<b>Total</b>	<b>3.91</b>	<b>14.97</b>	<b>29.71</b>	<b>0.05</b>	<b>1.42</b>	<b>1.30</b>	<b>4623.08</b>	<b>0.35</b>	<b>0.12</b>	<b>4667.80</b>

**Table 72**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Riser Erection**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.01	0.07	0.09	0.00	0.01	0.01	10.55	0.00	0.00	10.7
R/T Crane (L)	0.03	0.12	0.28	0.00	0.01	0.01	47.23	0.00	0.00	47.7
<b>Total</b>	<b>0.05</b>	<b>0.19</b>	<b>0.37</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>57.79</b>	<b>0.00</b>	<b>0.00</b>	<b>58.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Truck, 4x4	6	25	N/A	28
1-Ton Truck, 4x4	6	25	N/A	28
Water Truck	1	25	N/A	28
Worker Commute	18	25	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Truck, 4x4	MDV Gas	2.83E-04	7.84E-03	1.14E-03	1.32E-05	1.03E-04	4.38E-06	1.15E+00	7.00E-05	4.76E-05
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.05	1.32	0.19	0.00	0.02	0.00	193.96	0.01	0.01	196.68
1-Ton Truck, 4x4	0.01	0.06	0.19	0.00	0.03	0.01	125.81	0.00	0.00	127.30

**Table 72**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Riser Erection**

Water Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Worker Commute	0.18	5.24	0.57	0.01	0.11	0.00	727.73	0.04	0.02	736.03
<b>Offsite Total</b>	<b>0.25</b>	<b>6.70</b>	<b>1.42</b>	<b>0.01</b>	<b>0.17</b>	<b>0.02</b>	<b>1146.62</b>	<b>0.06</b>	<b>0.04</b>	<b>1160.20</b>
<b>Total</b>	<b>0.25</b>	<b>6.70</b>	<b>1.42</b>	<b>0.01</b>	<b>0.17</b>	<b>0.02</b>	<b>1146.62</b>	<b>0.06</b>	<b>0.04</b>	<b>1160.20</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	0.00	0.02	0.00	0.00	0.00	0.00	2.42	0.00	0.00	2.46
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.57	0.00	0.00	1.59
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.24	0.00	0.00	1.25
Worker Commute	0.00	0.07	0.01	0.00	0.00	0.00	9.10	0.00	0.00	9.20
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.33</b>	<b>0.00</b>	<b>0.00</b>	<b>14.50</b>
<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>14.33</b>	<b>0.00</b>	<b>0.00</b>	<b>14.50</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Truck, 4x4	6	Unpaved	18	25	1.102	0.110	118.99	11.90	1.49	0.15
3/4-Ton Truck, 4x4	6	Paved	10	25	0.003	0.001	0.20	0.05	0.00	0.00
1-Ton Truck, 4x4	6	Unpaved	18	25	1.311	0.131	141.54	14.15	1.77	0.18
1-Ton Truck, 4x4	6	Paved	10	25	0.003	0.001	0.20	0.05	0.00	0.00
Water Truck	1	Unpaved	18	25	2.273	0.227	40.91	4.09	0.51	0.05
Water Truck	1	Paved	10	25	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	18	Paved	58	25	0.003	0.001	3.48	0.85	0.04	0.01
<b>Offsite Total</b>							<b>305.34</b>	<b>31.10</b>	<b>3.82</b>	<b>0.39</b>
<b>Total</b>							<b>305.34</b>	<b>31.10</b>	<b>3.82</b>	<b>0.39</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 72**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**TSP Riser Erection**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 73**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Vault Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.29	10.15	17.45	0.03	0.69	0.63	3,209.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	6.58	1.00	
<b>Onsite Total</b>	<b>2.29</b>	<b>10.15</b>	<b>17.45</b>	<b>0.03</b>	<b>7.27</b>	<b>1.63</b>	<b>3209.7</b>
Offsite Motor Vehicle Exhaust	0.24	3.42	6.54	0.02	0.26	0.12	1,714.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	458.59	46.19	
<b>Offsite Total</b>	<b>0.24</b>	<b>3.42</b>	<b>6.54</b>	<b>0.02</b>	<b>458.85</b>	<b>46.31</b>	<b>1714.9</b>
<b>Total</b>	<b>2.54</b>	<b>13.57</b>	<b>23.99</b>	<b>0.05</b>	<b>466.12</b>	<b>47.94</b>	<b>4924.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.05	0.24	0.38	0.00	0.02	0.01	71.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.06	0.01	
<b>Onsite Total</b>	<b>0.05</b>	<b>0.24</b>	<b>0.38</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>71.4</b>
Offsite Motor Vehicle Exhaust	0.01	0.08	0.13	0.00	0.01	0.00	35.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	10.29	1.04	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.13</b>	<b>0.00</b>	<b>10.29</b>	<b>1.04</b>	<b>35.4</b>
<b>Total</b>	<b>0.06</b>	<b>0.32</b>	<b>0.51</b>	<b>0.00</b>	<b>10.37</b>	<b>1.06</b>	<b>106.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	125	1	54	8
Excavator	250	1	54	7
Crane (L)	500	1	30	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Excavator	250	0.105	0.339	0.785	0.002	0.026	0.024	158.540	0.009	0.004	Excavators
Crane (L)	500	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.63	4.68	4.45	0.01	0.23	0.22	810.37	0.06	0.02	818.1
Excavator	0.74	2.37	5.50	0.01	0.18	0.17	1109.78	0.07	0.03	1,120.1
Crane (L)	0.93	3.10	7.50	0.01	0.27	0.25	1259.58	0.08	0.03	1,271.5

**Table 73**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Vault Installation**

<b>Total</b>	<b>2.29</b>	<b>10.15</b>	<b>17.45</b>	<b>0.03</b>	<b>0.69</b>	<b>0.63</b>	<b>3179.73</b>	<b>0.21</b>	<b>0.08</b>	<b>3209.71</b>
--------------	-------------	--------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO <sub>2</sub> (tons) <sup>a</sup>	CH <sub>4</sub> (tons) <sup>a</sup>	N <sub>2</sub> O (tons) <sup>a</sup>	CO <sub>2</sub> e (tons) <sup>b</sup>
Backhoe/Front Loader	0.02	0.13	0.12	0.00	0.01	0.01	21.88	0.00	0.00	22.1
Excavator	0.02	0.06	0.15	0.00	0.00	0.00	29.96	0.00	0.00	30.2
Crane (L)	0.01	0.05	0.11	0.00	0.00	0.00	18.89	0.00	0.00	19.1
<b>Total</b>	<b>0.05</b>	<b>0.24</b>	<b>0.38</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>70.74</b>	<b>0.00</b>	<b>0.00</b>	<b>71.40</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) emission factors are CO<sub>2</sub> emissions plus 21 x CH<sub>4</sub> emissions plus 310 x N<sub>2</sub>O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	54	N/A	28
Dump Truck	2	54	N/A	28
Water Truck	1	54	N/A	28
Concrete Mixer Truck	3	20	N/A	60
Lowboy Truck/Trailer	1	54	N/A	28
Flat Bed Truck/Trailer	3	54	N/A	28
Worker Commute	8	54	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO <sub>2</sub> (lb/mi) <sup>a</sup>	CH <sub>4</sub> (lb/mi) <sup>a</sup>	N <sub>2</sub> O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO <sub>2</sub> (lb/day) <sup>a</sup>	CH <sub>4</sub> (lb/day) <sup>a</sup>	N <sub>2</sub> O (lb/day) <sup>a</sup>	CO <sub>2</sub> e (lb/day) <sup>b</sup>
---------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	--	--	---	--

**Table 73**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Vault Installation**

<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	41.94	0.00	0.00	42.43
Dump Truck	0.02	0.16	0.93	0.00	0.03	0.02	198.25	0.00	0.01	200.37
Water Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Concrete Mixer Truck	0.08	0.51	2.98	0.01	0.10	0.05	637.25	0.00	0.02	644.05
Lowboy Truck/Trailer	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Flat Bed Truck/Trailer	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.24</b>	<b>3.42</b>	<b>6.54</b>	<b>0.02</b>	<b>0.26</b>	<b>0.12</b>	<b>1696.51</b>	<b>0.03</b>	<b>0.06</b>	<b>1714.92</b>
<b>Total</b>	<b>0.24</b>	<b>3.42</b>	<b>6.54</b>	<b>0.02</b>	<b>0.26</b>	<b>0.12</b>	<b>1696.51</b>	<b>0.03</b>	<b>0.06</b>	<b>1714.92</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.13	0.00	0.00	1.15
Dump Truck	0.00	0.00	0.03	0.00	0.00	0.00	5.35	0.00	0.00	5.41
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.68	0.00	0.00	2.71
Concrete Mixer Truck	0.00	0.01	0.03	0.00	0.00	0.00	6.37	0.00	0.00	6.44
Lowboy Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	2.68	0.00	0.00	2.71
Flat Bed Truck/Trailer	0.00	0.01	0.04	0.00	0.00	0.00	8.03	0.00	0.00	8.12
Worker Commute	0.00	0.06	0.01	0.00	0.00	0.00	8.73	0.00	0.00	8.83
<b>Offsite Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.13</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.97</b>	<b>0.00</b>	<b>0.00</b>	<b>35.35</b>
<b>Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.13</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.97</b>	<b>0.00</b>	<b>0.00</b>	<b>35.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	2	Unpaved	18	54	1.311	0.131	47.18	4.72	1.27	0.13
1-Ton Truck, 4x4	2	Paved	10	54	0.003	0.001	0.07	0.02	0.00	0.00
Dump Truck	2	Unpaved	18	54	2.273	0.227	81.83	8.18	2.21	0.22

**Table 73**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Vault Installation**

Dump Truck	2	Paved	10	54	0.003	0.001	0.07	0.02	0.00	0.00
Water Truck	1	Unpaved	18	54	2.273	0.227	40.91	4.09	1.10	0.11
Water Truck	1	Paved	10	54	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Mixer Truck	3	Unpaved	18	20	2.273	0.227	122.74	12.27	1.23	0.12
Concrete Mixer Truck	3	Paved	42	20	0.003	0.001	0.42	0.10	0.00	0.00
Lowboy Truck/Trailer	1	Unpaved	18	54	2.273	0.227	40.91	4.09	1.10	0.11
Lowboy Truck/Trailer	1	Paved	10	54	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Truck/Trailer	3	Unpaved	18	54	2.273	0.227	122.74	12.27	3.31	0.33
Flat Bed Truck/Trailer	3	Paved	10	54	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	8	Paved	58	54	0.003	0.001	1.54	0.38	0.04	0.01
<b>Offsite Total</b>							<b>458.59</b>	<b>46.19</b>	<b>10.29</b>	<b>1.04</b>
<b>Total</b>							<b>458.59</b>	<b>46.19</b>	<b>10.29</b>	<b>1.04</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	99	1773	6.65E-02	1.01E-02	6.58	1.00	0.06	0.01
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>6.58</b>	<b>1.00</b>	<b>0.06</b>	<b>0.01</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Daily based on 1 vault/day, 11 ft.-2 in. x 21 ft.-4 in. x 11 ft.-2 in.; total based on 18 vaults

**Table 74**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Duct Bank Installation**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.87	5.67	5.90	0.01	0.37	0.34	952.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	4.12	0.62	
<b>Onsite Total</b>	<b>0.87</b>	<b>5.67</b>	<b>5.90</b>	<b>0.01</b>	<b>4.49</b>	<b>0.97</b>	<b>952.9</b>
Offsite Motor Vehicle Exhaust	0.27	3.58	7.47	0.02	0.29	0.13	1,915.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	540.49	54.39	
<b>Offsite Total</b>	<b>0.27</b>	<b>3.58</b>	<b>7.47</b>	<b>0.02</b>	<b>540.78</b>	<b>54.52</b>	<b>1915.3</b>
<b>Total</b>	<b>1.13</b>	<b>9.25</b>	<b>13.37</b>	<b>0.03</b>	<b>545.27</b>	<b>55.49</b>	<b>2868.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.13	0.13	0.00	0.01	0.01	21.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.10	0.01	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.13</b>	<b>0.13</b>	<b>0.00</b>	<b>0.11</b>	<b>0.02</b>	<b>21.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.12	0.00	0.01	0.00	33.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	10.28	1.04	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.12</b>	<b>0.00</b>	<b>10.29</b>	<b>1.04</b>	<b>33.7</b>
<b>Total</b>	<b>0.02</b>	<b>0.20</b>	<b>0.25</b>	<b>0.00</b>	<b>10.40</b>	<b>1.06</b>	<b>55.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Compressor Trailer	120	1	35	5
Backhoe/Front Loader	125	1	48	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Compressor Trailer	120	0.063	0.315	0.401	0.001	0.034	0.031	46.908	0.006	0.001	Air Compressors
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Compressor Trailer	0.31	1.58	2.00	0.00	0.17	0.15	234.54	0.03	0.01	237.0
Backhoe/Front Loader	0.55	4.09	3.90	0.01	0.20	0.19	709.07	0.05	0.02	715.9
<b>Total</b>	<b>0.87</b>	<b>5.67</b>	<b>5.90</b>	<b>0.01</b>	<b>0.37</b>	<b>0.34</b>	<b>943.61</b>	<b>0.08</b>	<b>0.02</b>	<b>952.90</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 74**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Duct Bank Installation**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Compressor Trailer	0.01	0.03	0.04	0.00	0.00	0.00	4.10	0.00	0.00	4.1
Backhoe/Front Loader	0.01	0.10	0.09	0.00	0.00	0.00	17.02	0.00	0.00	17.2
<b>Total</b>	<b>0.02</b>	<b>0.13</b>	<b>0.13</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>21.12</b>	<b>0.00</b>	<b>0.00</b>	<b>21.33</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	48	N/A	28
Dump Truck	3	40	N/A	28
Water Truck	1	48	N/A	28
Concrete Mixer Truck	3	15	N/A	60
Lowboy Truck/Trailer	1	48	N/A	28
Flat Bed Truck/Trailer	3	48	N/A	28
Pipe Truck/Trailer	1	40	N/A	28
Worker Commute	8	48	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Mixer Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Pipe Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 74**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Duct Bank Installation**

<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	41.94	0.00	0.00	42.43
Dump Truck	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Water Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Concrete Mixer Truck	0.08	0.51	2.98	0.01	0.10	0.05	637.25	0.00	0.02	644.05
Lowboy Truck/Trailer	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Flat Bed Truck/Trailer	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Pipe Truck/Trailer	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.27</b>	<b>3.58</b>	<b>7.47</b>	<b>0.02</b>	<b>0.29</b>	<b>0.13</b>	<b>1894.76</b>	<b>0.03</b>	<b>0.06</b>	<b>1915.29</b>
<b>Total</b>	<b>0.27</b>	<b>3.58</b>	<b>7.47</b>	<b>0.02</b>	<b>0.29</b>	<b>0.13</b>	<b>1894.76</b>	<b>0.03</b>	<b>0.06</b>	<b>1915.29</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.01	0.00	0.00	1.02
Dump Truck	0.00	0.00	0.03	0.00	0.00	0.00	5.95	0.00	0.00	6.01
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.38	0.00	0.00	2.40
Concrete Mixer Truck	0.00	0.00	0.02	0.00	0.00	0.00	4.78	0.00	0.00	4.83
Lowboy Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	2.38	0.00	0.00	2.40
Flat Bed Truck/Trailer	0.00	0.01	0.03	0.00	0.00	0.00	7.14	0.00	0.00	7.21
Pipe Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	1.98	0.00	0.00	2.00
Worker Commute	0.00	0.06	0.01	0.00	0.00	0.00	7.76	0.00	0.00	7.85
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.12</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>33.37</b>	<b>0.00</b>	<b>0.00</b>	<b>33.74</b>
<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.12</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>33.37</b>	<b>0.00</b>	<b>0.00</b>	<b>33.74</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	2	Unpaved	18	48	1.311	0.131	47.18	4.72	1.13	0.11
1-Ton Truck, 4x4	2	Paved	10	48	0.003	0.001	0.07	0.02	0.00	0.00
Dump Truck	3	Unpaved	18	40	2.273	0.227	122.74	12.27	2.45	0.25

**Table 74**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Duct Bank Installation**

Dump Truck	3	Paved	10	40	0.003	0.001	0.10	0.02	0.00	0.00
Water Truck	1	Unpaved	18	48	2.273	0.227	40.91	4.09	0.98	0.10
Water Truck	1	Paved	10	48	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Mixer Truck	3	Unpaved	18	15	2.273	0.227	122.74	12.27	0.92	0.09
Concrete Mixer Truck	3	Paved	42	15	0.003	0.001	0.42	0.10	0.00	0.00
Lowboy Truck/Trailer	1	Unpaved	18	48	2.273	0.227	40.91	4.09	0.98	0.10
Lowboy Truck/Trailer	1	Paved	10	48	0.003	0.001	0.03	0.01	0.00	0.00
Flat Bed Truck/Trailer	3	Unpaved	18	48	2.273	0.227	122.74	12.27	2.95	0.29
Flat Bed Truck/Trailer	3	Paved	10	48	0.003	0.001	0.10	0.02	0.00	0.00
Pipe Truck/Trailer	1	Unpaved	18	40	2.273	0.227	40.91	4.09	0.82	0.08
Pipe Truck/Trailer	1	Paved	10	40	0.003	0.001	0.03	0.01	0.00	0.00
Worker Commute	8	Paved	58	48	0.003	0.001	1.54	0.38	0.04	0.01
<b>Offsite Total</b>							<b>540.49</b>	<b>54.39</b>	<b>10.28</b>	<b>1.04</b>
<b>Total</b>							<b>540.49</b>	<b>54.39</b>	<b>10.28</b>	<b>1.04</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	62	2963	6.65E-02	1.01E-02	4.12	0.62	0.10	0.01
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>4.12</b>	<b>0.62</b>	<b>0.10</b>	<b>0.01</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

d Based on 24 in. x 60 in. x 8,000 ft. over 48 days



**Table 75**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install Underground Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	4.07	16.16	40.04	0.08	1.28	1.18	8,125.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>4.07</b>	<b>16.16</b>	<b>40.04</b>	<b>0.08</b>	<b>1.28</b>	<b>1.18</b>	<b>8125.4</b>
Offsite Motor Vehicle Exhaust	0.22	3.23	5.42	0.02	0.22	0.10	1,471.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	499.22	50.21	
<b>Offsite Total</b>	<b>0.22</b>	<b>3.23</b>	<b>5.42</b>	<b>0.02</b>	<b>499.44</b>	<b>50.31</b>	<b>1471.6</b>
<b>Total</b>	<b>4.28</b>	<b>19.38</b>	<b>45.46</b>	<b>0.09</b>	<b>500.72</b>	<b>51.48</b>	<b>9597.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.08	0.35	0.86	0.00	0.03	0.02	183.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.08</b>	<b>0.35</b>	<b>0.86</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>183.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.08	0.12	0.00	0.00	0.00	32.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	10.98	1.10	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.12</b>	<b>0.00</b>	<b>10.98</b>	<b>1.11</b>	<b>32.9</b>
<b>Total</b>	<b>0.09</b>	<b>0.43</b>	<b>0.98</b>	<b>0.00</b>	<b>11.01</b>	<b>1.13</b>	<b>216.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Manlift/Bucket Truck	250	4	48	5
Boom/Crane Truck	350	1	15	7
Puller	350	2	48	5

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Manlift/Bucket Truck	250	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
Boom/Crane Truck	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Puller	350	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Manlift/Bucket Truck	1.90	8.19	22.14	0.04	0.66	0.61	4253.30	0.17	0.11	4,291.1
Boom/Crane Truck	0.93	3.10	7.50	0.01	0.27	0.25	1259.58	0.08	0.03	1,271.5
Puller	1.24	4.86	10.40	0.02	0.35	0.32	2540.10	0.11	0.07	2,562.9

**Table 75**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install Underground Cable**

<b>Total</b>	<b>4.07</b>	<b>16.16</b>	<b>40.04</b>	<b>0.08</b>	<b>1.28</b>	<b>1.18</b>	<b>8052.98</b>	<b>0.37</b>	<b>0.21</b>	<b>8125.45</b>
--------------	-------------	--------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Manlift/Bucket Truck	0.05	0.20	0.53	0.00	0.02	0.01	102.08	0.00	0.00	103.0
Boom/Crane Truck	0.01	0.04	0.08	0.00	0.00	0.00	19.05	0.00	0.00	19.2
Puller	0.03	0.12	0.25	0.00	0.01	0.01	60.96	0.00	0.00	61.5
<b>Total</b>	<b>0.08</b>	<b>0.35</b>	<b>0.86</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>182.09</b>	<b>0.01</b>	<b>0.00</b>	<b>183.72</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	2	48	N/A	28
Manlift/Bucket Truck	4	48	N/A	28
Boom/Crane Truck	1	15	N/A	28
Water Truck	1	48	N/A	28
Pipe Truck/Trailer	1	40	N/A	28
Wire Truck/Trailer	1	40	N/A	28
Flat Bed Truck/Trailer	3	48	N/A	28
Worker Commute	8	48	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Manlift/Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Boom/Crane Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Pipe Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Wire Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

**Table 75**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install Underground Cable**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	41.94	0.00	0.00	42.43
Manlift/Bucket Truck	0.05	0.32	1.85	0.00	0.06	0.03	396.51	0.00	0.01	400.74
Boom/Crane Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Water Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Pipe Truck/Trailer	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Wire Truck/Trailer	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Flat Bed Truck/Trailer	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.22</b>	<b>3.23</b>	<b>5.42</b>	<b>0.02</b>	<b>0.22</b>	<b>0.10</b>	<b>1455.77</b>	<b>0.03</b>	<b>0.05</b>	<b>1471.61</b>
<b>Total</b>	<b>0.22</b>	<b>3.23</b>	<b>5.42</b>	<b>0.02</b>	<b>0.22</b>	<b>0.10</b>	<b>1455.77</b>	<b>0.03</b>	<b>0.05</b>	<b>1471.61</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.01	0.00	0.00	1.02
Manlift/Bucket Truck	0.00	0.01	0.04	0.00	0.00	0.00	9.52	0.00	0.00	9.62
Boom/Crane Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.75
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.38	0.00	0.00	2.40
Pipe Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	1.98	0.00	0.00	2.00
Wire Truck/Trailer	0.00	0.00	0.01	0.00	0.00	0.00	1.98	0.00	0.00	2.00
Flat Bed Truck/Trailer	0.00	0.01	0.03	0.00	0.00	0.00	7.14	0.00	0.00	7.21
Worker Commute	0.00	0.06	0.01	0.00	0.00	0.00	7.76	0.00	0.00	7.85
<b>Offsite Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>32.51</b>	<b>0.00</b>	<b>0.00</b>	<b>32.86</b>
<b>Total</b>	<b>0.00</b>	<b>0.08</b>	<b>0.12</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>32.51</b>	<b>0.00</b>	<b>0.00</b>	<b>32.86</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 75**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Install Underground Cable**

Offsite											
1-Ton Truck, 4x4	2	Unpaved	18	48	1.311	0.131	47.18	4.72	1.13	0.11	
1-Ton Truck, 4x4	2	Paved	10	48	0.003	0.001	0.07	0.02	0.00	0.00	
Manlift/Bucket Truck	4	Unpaved	18	48	2.273	0.227	163.66	16.37	3.93	0.39	
Manlift/Bucket Truck	4	Paved	10	48	0.003	0.001	0.13	0.03	0.00	0.00	
Boom/Crane Truck	1	Unpaved	18	15	2.273	0.227	40.91	4.09	0.31	0.03	
Boom/Crane Truck	1	Paved	10	15	0.003	0.001	0.03	0.01	0.00	0.00	
Water Truck	1	Unpaved	18	48	2.273	0.227	40.91	4.09	0.98	0.10	
Water Truck	1	Paved	10	48	0.003	0.001	0.03	0.01	0.00	0.00	
Pipe Truck/Trailer	1	Unpaved	18	40	2.273	0.227	40.91	4.09	0.82	0.08	
Pipe Truck/Trailer	1	Paved	10	40	0.003	0.001	0.03	0.01	0.00	0.00	
Wire Truck/Trailer	1	Unpaved	18	40	2.273	0.227	40.91	4.09	0.82	0.08	
Wire Truck/Trailer	1	Paved	10	40	0.003	0.001	0.03	0.01	0.00	0.00	
Flat Bed Truck/Trailer	3	Unpaved	18	48	2.273	0.227	122.74	12.27	2.95	0.29	
Flat Bed Truck/Trailer	3	Paved	10	48	0.003	0.001	0.10	0.02	0.00	0.00	
Worker Commute	8	Paved	58	48	0.003	0.001	1.54	0.38	0.04	0.01	
<b>Offsite Total</b>							<b>499.22</b>	<b>50.21</b>	<b>10.98</b>	<b>1.10</b>	
<b>Total</b>							<b>499.22</b>	<b>50.21</b>	<b>10.98</b>	<b>1.10</b>	

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 76**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Restoration**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	5.94	28.86	44.31	0.08	2.24	2.06	7,043.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	2414.68	799.87	
<b>Onsite Total</b>	<b>5.94</b>	<b>28.86</b>	<b>44.31</b>	<b>0.08</b>	<b>2416.92</b>	<b>801.93</b>	<b>7043.6</b>
Offsite Motor Vehicle Exhaust	0.26	6.43	2.30	0.01	0.20	0.04	1,297.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	275.45	28.18	
<b>Offsite Total</b>	<b>0.26</b>	<b>6.43</b>	<b>2.30</b>	<b>0.01</b>	<b>275.65</b>	<b>28.22</b>	<b>1297.3</b>
<b>Total</b>	<b>6.20</b>	<b>35.29</b>	<b>46.60</b>	<b>0.09</b>	<b>2692.57</b>	<b>830.15</b>	<b>8340.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.19	1.09	1.24	0.00	0.09	0.08	174.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	90.55	30.00	
<b>Onsite Total</b>	<b>0.19</b>	<b>1.09</b>	<b>1.24</b>	<b>0.00</b>	<b>90.64</b>	<b>30.08</b>	<b>174.3</b>
Offsite Motor Vehicle Exhaust	0.01	0.24	0.09	0.00	0.01	0.00	48.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	10.33	1.06	
<b>Offsite Total</b>	<b>0.01</b>	<b>0.24</b>	<b>0.09</b>	<b>0.00</b>	<b>10.34</b>	<b>1.06</b>	<b>48.6</b>
<b>Total</b>	<b>0.20</b>	<b>1.33</b>	<b>1.33</b>	<b>0.00</b>	<b>100.98</b>	<b>31.13</b>	<b>223.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	125	3	75	7
Motor Grader	250	3	75	7
Drum Type Compactor	100	3	75	7

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	125	0.079	0.584	0.557	0.001	0.029	0.027	101.296	0.007	0.003	Tractors/Loaders/Backhoes
Motor Grader	250	0.125	0.393	1.043	0.002	0.036	0.033	171.959	0.011	0.004	Graders
Drum Type Compactor	100	0.079	0.397	0.511	0.001	0.042	0.038	58.936	0.007	0.002	Rollers

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	1.65	12.27	11.69	0.02	0.61	0.56	2127.21	0.15	0.06	2,147.6
Motor Grader	2.62	8.26	21.90	0.04	0.75	0.69	3611.13	0.24	0.09	3,645.2
Drum Type Compactor	1.67	8.33	10.72	0.01	0.87	0.80	1237.65	0.15	0.03	1,250.9

**Table 76**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Restoration**

<b>Total</b>	<b>5.94</b>	<b>28.86</b>	<b>44.31</b>	<b>0.08</b>	<b>2.24</b>	<b>2.06</b>	<b>6976.00</b>	<b>0.54</b>	<b>0.18</b>	<b>7043.63</b>
--------------	-------------	--------------	--------------	-------------	-------------	-------------	----------------	-------------	-------------	----------------

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.06	0.46	0.44	0.00	0.02	0.02	79.77	0.01	0.00	80.5
Motor Grader	0.06	0.31	0.40	0.00	0.03	0.03	46.41	0.01	0.00	46.9
Drum Type Compactor	0.06	0.31	0.40	0.00	0.03	0.03	46.41	0.01	0.00	46.9
<b>Total</b>	<b>0.19</b>	<b>1.09</b>	<b>1.24</b>	<b>0.00</b>	<b>0.09</b>	<b>0.08</b>	<b>172.59</b>	<b>0.02</b>	<b>0.00</b>	<b>174.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Truck, 4x4	6	75	N/A	28
Water Truck	3	75	N/A	28
Lowboy Truck/Trailer	3	75	N/A	1
Worker Commute	21	75	N/A	58

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Lowboy Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.01	0.06	0.19	0.00	0.03	0.01	125.81	0.00	0.00	127.30
Water Truck	0.04	0.24	1.39	0.00	0.05	0.03	297.38	0.00	0.01	300.56

**Table 76  
Alternative Transmission and Subtransmission Construction Emissions with Segment 9  
Restoration**

Lowboy Truck/Trailer	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.21	6.12	0.67	0.01	0.13	0.00	849.02	0.05	0.03	858.71
<b>Offsite Total</b>	<b>0.26</b>	<b>6.43</b>	<b>2.30</b>	<b>0.01</b>	<b>0.20</b>	<b>0.04</b>	<b>1282.83</b>	<b>0.05</b>	<b>0.04</b>	<b>1297.30</b>
<b>Total</b>	<b>0.26</b>	<b>6.43</b>	<b>2.30</b>	<b>0.01</b>	<b>0.20</b>	<b>0.04</b>	<b>1282.83</b>	<b>0.05</b>	<b>0.04</b>	<b>1297.30</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	4.72	0.00	0.00	4.77
Water Truck	0.00	0.01	0.05	0.00	0.00	0.00	11.15	0.00	0.00	11.27
Lowboy Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.40
Worker Commute	0.01	0.23	0.03	0.00	0.00	0.00	31.84	0.00	0.00	32.20
<b>Offsite Total</b>	<b>0.01</b>	<b>0.24</b>	<b>0.09</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>48.11</b>	<b>0.00</b>	<b>0.00</b>	<b>48.65</b>
<b>Total</b>	<b>0.01</b>	<b>0.24</b>	<b>0.09</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>48.11</b>	<b>0.00</b>	<b>0.00</b>	<b>48.65</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0		0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Truck, 4x4	6	Unpaved	18	75	1.311	0.131	141.54	14.15	5.31	0.53
1-Ton Truck, 4x4	6	Paved	10	75	0.003	0.001	0.20	0.05	0.01	0.00
Water Truck	3	Unpaved	18	75	2.273	0.227	122.74	12.27	4.60	0.46
Water Truck	3	Paved	10	75	0.003	0.001	0.10	0.02	0.00	0.00
Lowboy Truck/Trailer	3	Unpaved	1	75	2.273	0.227	6.82	0.68	0.26	0.03
Lowboy Truck/Trailer	3	Paved	0	75	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	21	Paved	58	75	0.003	0.001	4.06	1.00	0.15	0.04
<b>Offsite Total</b>							<b>275.45</b>	<b>28.18</b>	<b>10.33</b>	<b>1.06</b>
<b>Total</b>							<b>275.45</b>	<b>28.18</b>	<b>10.33</b>	<b>1.06</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 76**  
**Alternative Transmission and Subtransmission Construction Emissions with Segment 9**  
**Restoration**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr	21	1575	114.985	38.089	2414.68	799.87	90.55	30.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>2414.68</b>	<b>799.87</b>	<b>90.55</b>	<b>30.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 77**  
**Alternative Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 2/Segment 8) - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.05	1.25	0.61	0.00	0.04	0.01	274.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	24.30	2.56	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>24.34</b>	<b>2.57</b>	<b>274.4</b>
<b>Total</b>	<b>1.57</b>	<b>7.80</b>	<b>18.32</b>	<b>0.04</b>	<b>24.87</b>	<b>3.05</b>	<b>3707.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.03	0.12	0.32	0.00	0.01	0.01	61.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.03</b>	<b>0.12</b>	<b>0.32</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>61.8</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	4.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.44	0.05	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.44</b>	<b>0.05</b>	<b>4.9</b>
<b>Total</b>	<b>0.03</b>	<b>0.14</b>	<b>0.33</b>	<b>0.00</b>	<b>0.45</b>	<b>0.05</b>	<b>66.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	36	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>

**Table 77**  
**Alternative Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 2/Segment 8) - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.03	0.12	0.32	0.00	0.01	0.01	61.25	0.00	0.00	61.8
<b>Total</b>	<b>0.03</b>	<b>0.12</b>	<b>0.32</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>61.25</b>	<b>0.00</b>	<b>0.00</b>	<b>61.79</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	36	N/A	14
Bucket Truck	2	36	N/A	14
Worker Commute	4	36	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 77**  
**Alternative Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 2/Segment 8) - Install Cable**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
Bucket Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>271.33</b>	<b>0.01</b>	<b>0.01</b>	<b>274.36</b>
<b>Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>271.33</b>	<b>0.01</b>	<b>0.01</b>	<b>274.36</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.19
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.78	0.00	0.00	1.80
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.91	0.00	0.00	2.94
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.88</b>	<b>0.00</b>	<b>0.00</b>	<b>4.94</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.88</b>	<b>0.00</b>	<b>0.00</b>	<b>4.94</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	36	1.311	0.131	5.24	0.52	0.09	0.01
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	36	0.003	0.001	0.03	0.01	0.00	0.00
Bucket Truck	2	Unpaved	4	36	2.273	0.227	18.18	1.82	0.33	0.03
Bucket Truck	2	Paved	10	36	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	36	0.003	0.001	0.77	0.19	0.01	0.00
<b>Offsite Total</b>							<b>24.30</b>	<b>2.56</b>	<b>0.44</b>	<b>0.05</b>
<b>Total</b>							<b>24.30</b>	<b>2.56</b>	<b>0.44</b>	<b>0.05</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 77**  
**Alternative Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 2/Segment 8) - Install Cable**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 78**  
**Alternative Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 2/Segment 8) - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.18	0.16	0.00	0.03	0.00	184.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	11.32	1.25	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>11.35</b>	<b>1.26</b>	<b>184.8</b>
<b>Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>11.35</b>	<b>1.26</b>	<b>184.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 78**  
**Alternative Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 2/Segment 8) - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	2	N/A	14
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.01	0.03	0.00	0.00	0.00	20.97	0.00	0.00	21.22
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 78**  
**Alternative Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 2/Segment 8) - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>182.69</b>	<b>0.01</b>	<b>0.01</b>	<b>184.78</b>
<b>Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>182.69</b>	<b>0.01</b>	<b>0.01</b>	<b>184.78</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	4	2	1.311	0.131	10.48	1.05	0.01	0.00
Splicing Lab	2	Paved	10	2	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	4	0.003	0.001	0.77	0.19	0.00	0.00
<b>Offsite Total</b>							<b>11.32</b>	<b>1.25</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>11.32</b>	<b>1.25</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 78**  
**Alternative Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 2/Segment 8) - Splice Fiber Optic Cable**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 79**  
**Alternative Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 2/Segment 8) - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.86	0.28	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>2.07</b>	<b>0.47</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.68	1.42	0.01	0.07	0.02	490.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	29.09	3.09	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>29.16</b>	<b>3.12</b>	<b>490.4</b>
<b>Total</b>	<b>0.90</b>	<b>4.50</b>	<b>7.74</b>	<b>0.02</b>	<b>31.23</b>	<b>3.59</b>	<b>1875.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	9.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>9.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.17	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.17</b>	<b>0.02</b>	<b>2.6</b>
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.05</b>	<b>0.00</b>	<b>0.18</b>	<b>0.02</b>	<b>12.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	14	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 79**  
**Alternative Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 2/Segment 8) - Underground Conduit and Structures**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.01	0.02	0.04	0.00	0.00	0.00	9.61	0.00	0.00	9.7
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.61</b>	<b>0.00</b>	<b>0.00</b>	<b>9.70</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	14	N/A	14
1-Ton Crew Cab Flatbed, 4x4	1	14	N/A	14
Water Truck	1	14	N/A	14
Concrete Truck	1	6	N/A	60
Worker Commute	5	14	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
Water Truck	0.01	0.04	0.23	0.00	0.01	0.00	49.56	0.00	0.00	50.09
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45

**Table 79**  
**Alternative Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 2/Segment 8) - Underground Conduit and Structures**

<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>485.09</b>	<b>0.01</b>	<b>0.02</b>	<b>490.45</b>
<b>Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>485.09</b>	<b>0.01</b>	<b>0.02</b>	<b>490.45</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.35
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.42	0.00	0.00	1.43
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.55</b>	<b>0.00</b>	<b>0.00</b>	<b>2.57</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.55</b>	<b>0.00</b>	<b>0.00</b>	<b>2.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	4	14	1.102	0.110	4.41	0.44	0.03	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	10	14	0.003	0.001	0.03	0.01	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	14	1.311	0.131	5.24	0.52	0.04	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	14	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	4	14	2.273	0.227	9.09	0.91	0.06	0.01
Water Truck	1	Paved	10	14	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Truck	1	Unpaved	4	6	2.273	0.227	9.09	0.91	0.03	0.00
Concrete Truck	1	Paved	56	6	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	58	14	0.003	0.001	0.97	0.24	0.01	0.00
<b>Offsite Total</b>							<b>29.09</b>	<b>3.09</b>	<b>0.17</b>	<b>0.02</b>
<b>Total</b>							<b>29.09</b>	<b>3.09</b>	<b>0.17</b>	<b>0.02</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 79**  
**Alternative Telecommunications Construction Emissions**  
**LADWP Corridor Underground Crossing (Segment 2/Segment 8) - Underground Conduit and Structures**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	28	311	6.65E-02	1.01E-02	1.86	0.28	0.01	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.86</b>	<b>0.28</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 2,800 ft. long x 1 ft. wide x 3 ft. deep over 11 days

**Table 80**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.05	1.25	0.61	0.00	0.04	0.01	274.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	24.30	2.56	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>24.34</b>	<b>2.57</b>	<b>274.4</b>
<b>Total</b>	<b>1.57</b>	<b>7.80</b>	<b>18.32</b>	<b>0.04</b>	<b>24.87</b>	<b>3.05</b>	<b>3707.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.05	0.13	0.00	0.00	0.00	25.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.13</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>25.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	2.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.18	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.18</b>	<b>0.02</b>	<b>2.1</b>
<b>Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.14</b>	<b>0.00</b>	<b>0.19</b>	<b>0.02</b>	<b>27.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	15	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>

**Table 80**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.01	0.05	0.13	0.00	0.00	0.00	25.52	0.00	0.00	25.7
<b>Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.13</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>25.52</b>	<b>0.00</b>	<b>0.00</b>	<b>25.75</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	15	N/A	14
Bucket Truck	2	15	N/A	14
Worker Commute	4	15	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 80**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Install Cable**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
Bucket Truck	0.01	0.08	0.46	0.00	0.02	0.01	99.13	0.00	0.00	100.19
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>271.33</b>	<b>0.01</b>	<b>0.01</b>	<b>274.36</b>
<b>Total</b>	<b>0.05</b>	<b>1.25</b>	<b>0.61</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>271.33</b>	<b>0.01</b>	<b>0.01</b>	<b>274.36</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.08
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.75
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.21	0.00	0.00	1.23
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.03</b>	<b>0.00</b>	<b>0.00</b>	<b>2.06</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.03</b>	<b>0.00</b>	<b>0.00</b>	<b>2.06</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	15	1.311	0.131	5.24	0.52	0.04	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	15	0.003	0.001	0.03	0.01	0.00	0.00
Bucket Truck	2	Unpaved	4	15	2.273	0.227	18.18	1.82	0.14	0.01
Bucket Truck	2	Paved	10	15	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	15	0.003	0.001	0.77	0.19	0.01	0.00
<b>Offsite Total</b>							<b>24.30</b>	<b>2.56</b>	<b>0.18</b>	<b>0.02</b>
<b>Total</b>							<b>24.30</b>	<b>2.56</b>	<b>0.18</b>	<b>0.02</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 80**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Install Cable**

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 81**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.18	0.16	0.00	0.03	0.00	184.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	11.32	1.25	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>11.35</b>	<b>1.26</b>	<b>184.8</b>
<b>Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>11.35</b>	<b>1.26</b>	<b>184.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 81**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	2	N/A	14
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.01	0.03	0.00	0.00	0.00	20.97	0.00	0.00	21.22
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 81**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>182.69</b>	<b>0.01</b>	<b>0.01</b>	<b>184.78</b>
<b>Total</b>	<b>0.04</b>	<b>1.18</b>	<b>0.16</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>182.69</b>	<b>0.01</b>	<b>0.01</b>	<b>184.78</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	4	2	1.311	0.131	10.48	1.05	0.01	0.00
Splicing Lab	2	Paved	10	2	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	4	0.003	0.001	0.77	0.19	0.00	0.00
<b>Offsite Total</b>							<b>11.32</b>	<b>1.25</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>11.32</b>	<b>1.25</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 81**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Splice Fiber Optic Cable**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 82**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.06	0.16	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>1.27</b>	<b>0.35</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.68	1.42	0.01	0.07	0.02	490.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	29.09	3.09	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>29.16</b>	<b>3.12</b>	<b>490.4</b>
<b>Total</b>	<b>0.90</b>	<b>4.50</b>	<b>7.74</b>	<b>0.02</b>	<b>30.43</b>	<b>3.47</b>	<b>1875.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	4.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.8</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>1.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.11</b>	<b>0.01</b>	<b>6.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	7	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 82**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Underground Conduit and Structures**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.01	0.02	0.00	0.00	0.00	4.80	0.00	0.00	4.8
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.80</b>	<b>0.00</b>	<b>0.00</b>	<b>4.85</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	7	N/A	14
1-Ton Crew Cab Flatbed, 4x4	1	7	N/A	14
Water Truck	1	7	N/A	14
Concrete Truck	1	7	N/A	60
Worker Commute	5	7	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	10.48	0.00	0.00	10.61
Water Truck	0.01	0.04	0.23	0.00	0.01	0.00	49.56	0.00	0.00	50.09
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45

**Table 82**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Underground Conduit and Structures**

<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>485.09</b>	<b>0.01</b>	<b>0.02</b>	<b>490.45</b>
<b>Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.42</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>485.09</b>	<b>0.01</b>	<b>0.02</b>	<b>490.45</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.18
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.75
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.72
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.70</b>	<b>0.00</b>	<b>0.00</b>	<b>1.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.70</b>	<b>0.00</b>	<b>0.00</b>	<b>1.72</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	4	7	1.102	0.110	4.41	0.44	0.02	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	10	7	0.003	0.001	0.03	0.01	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	7	1.311	0.131	5.24	0.52	0.02	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	7	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	4	7	2.273	0.227	9.09	0.91	0.03	0.00
Water Truck	1	Paved	10	7	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Truck	1	Unpaved	4	7	2.273	0.227	9.09	0.91	0.03	0.00
Concrete Truck	1	Paved	56	7	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	58	7	0.003	0.001	0.97	0.24	0.00	0.00
<b>Offsite Total</b>							<b>29.09</b>	<b>3.09</b>	<b>0.10</b>	<b>0.01</b>
<b>Total</b>							<b>29.09</b>	<b>3.09</b>	<b>0.10</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 82**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near Highway 47 (Segment 5) - Underground Conduit and Structures**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	16	111	6.65E-02	1.01E-02	1.06	0.16	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.06</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 1,000 ft. long x 1 ft. wide x 3 ft. deep over 7 days



**Table 83**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.05	1.24	0.54	0.00	0.04	0.01	258.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	12.59	1.39	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.24</b>	<b>0.54</b>	<b>0.00</b>	<b>12.62</b>	<b>1.39</b>	<b>258.5</b>
<b>Total</b>	<b>1.57</b>	<b>7.79</b>	<b>18.25</b>	<b>0.04</b>	<b>13.15</b>	<b>1.88</b>	<b>3691.4</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.08	0.22	0.00	0.01	0.01	42.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.08</b>	<b>0.22</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>42.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	3.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.16	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.16</b>	<b>0.02</b>	<b>3.2</b>
<b>Total</b>	<b>0.02</b>	<b>0.10</b>	<b>0.23</b>	<b>0.00</b>	<b>0.16</b>	<b>0.02</b>	<b>46.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	25	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>

**Table 83**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.08	0.22	0.00	0.01	0.01	42.53	0.00	0.00	42.9
<b>Total</b>	<b>0.02</b>	<b>0.08</b>	<b>0.22</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>42.53</b>	<b>0.00</b>	<b>0.00</b>	<b>42.91</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	25	N/A	12
Bucket Truck	2	25	N/A	12
Worker Commute	4	25	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 83**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Install Cable**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.99	0.00	0.00	9.09
Bucket Truck	0.01	0.07	0.40	0.00	0.01	0.01	84.97	0.00	0.00	85.87
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.05</b>	<b>1.24</b>	<b>0.54</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>255.67</b>	<b>0.01</b>	<b>0.01</b>	<b>258.53</b>
<b>Total</b>	<b>0.05</b>	<b>1.24</b>	<b>0.54</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>255.67</b>	<b>0.01</b>	<b>0.01</b>	<b>258.53</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.06	0.00	0.00	1.07
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	2.02	0.00	0.00	2.04
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.20</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.20</b>	<b>0.00</b>	<b>0.00</b>	<b>3.23</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	2	25	1.311	0.131	2.62	0.26	0.03	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	25	0.003	0.001	0.03	0.01	0.00	0.00
Bucket Truck	2	Unpaved	2	25	2.273	0.227	9.09	0.91	0.11	0.01
Bucket Truck	2	Paved	10	25	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	25	0.003	0.001	0.77	0.19	0.01	0.00
<b>Offsite Total</b>							<b>12.59</b>	<b>1.39</b>	<b>0.16</b>	<b>0.02</b>
<b>Total</b>							<b>12.59</b>	<b>1.39</b>	<b>0.16</b>	<b>0.02</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 83**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Install Cable**

**Earthwork Fugitive Particulate Matter Emissions**

<b>Activity</b>	<b>Activity Units</b>	<b>Daily Activity Level</b>	<b>Total Activity Level</b>	<b>PM10 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM2.5 Emission Factor (lb/activity)<sup>a</sup></b>	<b>PM10 (lb/day)<sup>b</sup></b>	<b>PM2.5 (lb/day)<sup>b</sup></b>	<b>PM10 (tons)<sup>c</sup></b>	<b>PM2.5 (tons)<sup>c</sup></b>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 84**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.15	0.00	0.03	0.00	181.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	6.08	0.73	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>6.11</b>	<b>0.73</b>	<b>181.7</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>6.11</b>	<b>0.73</b>	<b>181.7</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 84**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	2	N/A	12
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.01	0.03	0.00	0.00	0.00	17.97	0.00	0.00	18.19
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 84**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>179.69</b>	<b>0.01</b>	<b>0.01</b>	<b>181.75</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>179.69</b>	<b>0.01</b>	<b>0.01</b>	<b>181.75</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.00</b>	<b>0.00</b>	<b>0.35</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	2	2	1.311	0.131	5.24	0.52	0.01	0.00
Splicing Lab	2	Paved	10	2	0.003	0.001	0.07	0.02	0.00	0.00
Worker Commute	4	Paved	58	4	0.003	0.001	0.77	0.19	0.00	0.00
<b>Offsite Total</b>							<b>6.08</b>	<b>0.73</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>6.08</b>	<b>0.73</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 84**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Splice Fiber Optic Cable**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 85**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.66	0.25	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>1.87</b>	<b>0.44</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.67	1.38	0.01	0.07	0.02	480.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	15.18	1.70	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.67</b>	<b>1.38</b>	<b>0.01</b>	<b>15.25</b>	<b>1.72</b>	<b>480.3</b>
<b>Total</b>	<b>0.90</b>	<b>4.49</b>	<b>7.70</b>	<b>0.02</b>	<b>17.12</b>	<b>2.17</b>	<b>1865.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.02	0.03	0.00	0.00	0.00	7.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>7.6</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.08	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>2.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>10.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	11	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 85**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Underground Conduit and Structures**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.02	0.03	0.00	0.00	0.00	7.55	0.00	0.00	7.6
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.55</b>	<b>0.00</b>	<b>0.00</b>	<b>7.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	11	N/A	12
1-Ton Crew Cab Flatbed, 4x4	1	11	N/A	12
Water Truck	1	11	N/A	12
Concrete Truck	1	11	N/A	60
Worker Commute	5	11	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.99	0.00	0.00	9.09
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.99	0.00	0.00	9.09
Water Truck	0.01	0.03	0.20	0.00	0.01	0.00	42.48	0.00	0.00	42.94
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45

**Table 85**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Underground Conduit and Structures**

<b>Offsite Total</b>	<b>0.08</b>	<b>1.67</b>	<b>1.38</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>475.02</b>	<b>0.01</b>	<b>0.02</b>	<b>480.26</b>
<b>Total</b>	<b>0.08</b>	<b>1.67</b>	<b>1.38</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>475.02</b>	<b>0.01</b>	<b>0.02</b>	<b>480.26</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.24
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.17	0.00	0.00	1.18
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.11	0.00	0.00	1.12
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.61</b>	<b>0.00</b>	<b>0.00</b>	<b>2.64</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.61</b>	<b>0.00</b>	<b>0.00</b>	<b>2.64</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	2	11	1.102	0.110	2.20	0.22	0.01	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	2	11	1.311	0.131	2.62	0.26	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
Water Truck	1	Unpaved	2	11	2.273	0.227	4.55	0.45	0.03	0.00
Water Truck	1	Paved	10	11	0.003	0.001	0.03	0.01	0.00	0.00
Concrete Truck	1	Unpaved	2	11	2.273	0.227	4.55	0.45	0.03	0.00
Concrete Truck	1	Paved	58	11	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	58	11	0.003	0.001	0.97	0.24	0.01	0.00
<b>Offsite Total</b>							<b>15.18</b>	<b>1.70</b>	<b>0.08</b>	<b>0.01</b>
<b>Total</b>							<b>15.18</b>	<b>1.70</b>	<b>0.08</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 85**  
**Alternative Telecommunications Construction Emissions**  
**OPGW Underground Crossing near SR-18 (Segment 5) - Underground Conduit and Structures**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	25	278	6.65E-02	1.01E-02	1.66	0.25	0.01	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.66</b>	<b>0.25</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 2,500 ft. long x 1 ft. wide x 3 ft. deep over 11 days

**Table 86**  
**Alternative Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.08	2.34	0.31	0.00	0.05	0.00	339.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	23.51	2.57	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>23.56</b>	<b>2.57</b>	<b>339.0</b>
<b>Total</b>	<b>1.60</b>	<b>8.89</b>	<b>18.02</b>	<b>0.04</b>	<b>24.09</b>	<b>3.06</b>	<b>3771.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.10	0.28	0.00	0.01	0.01	54.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.10</b>	<b>0.28</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>54.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.04	0.00	0.00	0.00	0.00	5.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.16	0.02	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.17</b>	<b>0.02</b>	<b>5.4</b>
<b>Total</b>	<b>0.03</b>	<b>0.14</b>	<b>0.29</b>	<b>0.00</b>	<b>0.17</b>	<b>0.03</b>	<b>60.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	32	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>

**Table 86**  
**Alternative Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.10	0.28	0.00	0.01	0.01	54.44	0.00	0.00	54.9
<b>Total</b>	<b>0.02</b>	<b>0.10</b>	<b>0.28</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>54.44</b>	<b>0.00</b>	<b>0.00</b>	<b>54.93</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	32	N/A	1.5
Bucket Truck	2	32	N/A	1.5
Worker Commute	8	32	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 86**  
**Alternative Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Install Cable**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Bucket Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>335.18</b>	<b>0.02</b>	<b>0.01</b>	<b>339.00</b>
<b>Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>335.18</b>	<b>0.02</b>	<b>0.01</b>	<b>339.00</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.17
Worker Commute	0.00	0.04	0.00	0.00	0.00	0.00	5.17	0.00	0.00	5.23
<b>Offsite Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.36</b>	<b>0.00</b>	<b>0.00</b>	<b>5.42</b>
<b>Total</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.36</b>	<b>0.00</b>	<b>0.00</b>	<b>5.42</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	32	1.311	0.131	1.97	0.20	0.03	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	0	32	0.003	0.001	0.00	0.00	0.00	0.00
Bucket Truck	2	Unpaved	1.5	32	2.273	0.227	6.82	0.68	0.11	0.01
Bucket Truck	2	Paved	0	32	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	8	Paved	56.5	32	0.003	0.001	1.51	0.37	0.02	0.01
Worker Commute	8	Unpaved	1.5	32	1.102	0.110	13.22	1.32	0.00	0.00
<b>Offsite Total</b>							<b>23.51</b>	<b>2.57</b>	<b>0.16</b>	<b>0.02</b>
<b>Total</b>							<b>23.51</b>	<b>2.57</b>	<b>0.16</b>	<b>0.02</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 86**  
**Alternative Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Install Cable**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 87**  
**Alternative Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	165.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	11.29	1.24	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>11.32</b>	<b>1.24</b>	<b>165.8</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>11.32</b>	<b>1.24</b>	<b>165.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 87**  
**Alternative Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	4	N/A	1.5
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	2.25	0.00	0.00	2.27
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 87**  
**Alternative Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	1.5	4	1.311	0.131	3.93	0.39	0.01	0.00
Splicing Lab	2	Paved	0	4	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	4	Paved	56.5	4	0.003	0.001	0.75	0.18	0.00	0.00
Worker Commute	4	Unpaved	1.5	4	1.102	0.110	6.61	0.66	0.00	0.00
<b>Offsite Total</b>							<b>11.29</b>	<b>1.24</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>11.29</b>	<b>1.24</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 87**  
**Alternative Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Splice Fiber Optic Cable**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 88**  
**Alternative Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.59	0.24	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>1.80</b>	<b>0.43</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.68	1.45	0.01	0.07	0.02	485.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	19.89	2.16	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>19.96</b>	<b>2.19</b>	<b>485.8</b>
<b>Total</b>	<b>0.90</b>	<b>4.50</b>	<b>7.78</b>	<b>0.02</b>	<b>21.77</b>	<b>2.62</b>	<b>1871.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	9.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>9.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	3.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.08	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>3.4</b>
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.05</b>	<b>0.00</b>	<b>0.09</b>	<b>0.01</b>	<b>13.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	14	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 88**  
**Alternative Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Underground Conduit and Structures**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.01	0.02	0.04	0.00	0.00	0.00	9.61	0.00	0.00	9.7
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>9.61</b>	<b>0.00</b>	<b>0.00</b>	<b>9.70</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	14	N/A	1.5
1-Ton Crew Cab Flatbed, 4x4	1	14	N/A	1.5
Water Truck	1	14	N/A	18
Concrete Truck	1	14	N/A	60
Worker Commute	5	14	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45

**Table 88**  
**Alternative Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Underground Conduit and Structures**

<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>480.53</b>	<b>0.01</b>	<b>0.02</b>	<b>485.82</b>
<b>Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>480.53</b>	<b>0.01</b>	<b>0.02</b>	<b>485.82</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.45
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.49	0.00	0.00	1.50
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.42	0.00	0.00	1.43
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.36</b>	<b>0.00</b>	<b>0.00</b>	<b>3.40</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.36</b>	<b>0.00</b>	<b>0.00</b>	<b>3.40</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	1.5	14	1.102	0.110	1.65	0.17	0.01	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	0	14	0.003	0.001	0.00	0.00	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	14	1.311	0.131	1.97	0.20	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	0	14	0.003	0.001	0.00	0.00	0.00	0.00
Water Truck	1	Unpaved	1.5	14	2.273	0.227	3.41	0.34	0.02	0.00
Water Truck	1	Paved	16.5	14	0.003	0.001	0.05	0.01	0.00	0.00
Concrete Truck	1	Unpaved	1.5	14	2.273	0.227	3.41	0.34	0.02	0.00
Concrete Truck	1	Paved	58.5	14	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	56.5	14	0.003	0.001	0.94	0.23	0.01	0.00
Worker Commute	5	Unpaved	1.5	14	1.102	0.110	8.26	0.83	0.00	0.00
<b>Offsite Total</b>							<b>19.89</b>	<b>2.16</b>	<b>0.08</b>	<b>0.01</b>
<b>Total</b>							<b>19.89</b>	<b>2.16</b>	<b>0.08</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 88**  
**Alternative Telecommunications Construction Emissions**  
**OPGW from Last Transmission Towers to Desert View Substation Wall - Underground Conduit and Structures**

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	24	333	6.65E-02	1.01E-02	1.59	0.24	0.01	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.59</b>	<b>0.24</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 3,000 ft. long x 1 ft. wide x 3 ft. deep over 14 days



**Table 89**  
**Alternative Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.08	2.34	0.31	0.00	0.05	0.00	339.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	23.51	2.57	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>23.56</b>	<b>2.57</b>	<b>339.0</b>
<b>Total</b>	<b>1.60</b>	<b>8.89</b>	<b>18.02</b>	<b>0.04</b>	<b>24.09</b>	<b>3.06</b>	<b>3771.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.07	0.18	0.00	0.01	0.00	34.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.18</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>3.4</b>
<b>Total</b>	<b>0.02</b>	<b>0.09</b>	<b>0.18</b>	<b>0.00</b>	<b>0.11</b>	<b>0.02</b>	<b>37.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	20	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>

**Table 89**  
**Alternative Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.07	0.18	0.00	0.01	0.00	34.03	0.00	0.00	34.3
<b>Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.18</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.03</b>	<b>0.00</b>	<b>0.00</b>	<b>34.33</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	20	N/A	1.5
Bucket Truck	2	20	N/A	1.5
Worker Commute	8	20	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 89**  
**Alternative Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Install Cable**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Bucket Truck	0.00	0.01	0.05	0.00	0.00	0.00	10.62	0.00	0.00	10.73
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>335.18</b>	<b>0.02</b>	<b>0.01</b>	<b>339.00</b>
<b>Total</b>	<b>0.08</b>	<b>2.34</b>	<b>0.31</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>335.18</b>	<b>0.02</b>	<b>0.01</b>	<b>339.00</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.35</b>	<b>0.00</b>	<b>0.00</b>	<b>3.39</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.35</b>	<b>0.00</b>	<b>0.00</b>	<b>3.39</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	20	1.311	0.131	1.97	0.20	0.02	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	0	20	0.003	0.001	0.00	0.00	0.00	0.00
Bucket Truck	2	Unpaved	1.5	20	2.273	0.227	6.82	0.68	0.07	0.01
Bucket Truck	2	Paved	0	20	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	8	Paved	56.5	20	0.003	0.001	1.51	0.37	0.02	0.00
Worker Commute	8	Unpaved	1.5	20	1.102	0.110	13.22	1.32	0.00	0.00
<b>Offsite Total</b>							<b>23.51</b>	<b>2.57</b>	<b>0.10</b>	<b>0.01</b>
<b>Total</b>							<b>23.51</b>	<b>2.57</b>	<b>0.10</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 89**  
**Alternative Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Install Cable**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 90**  
**Alternative Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.13	0.00	0.02	0.00	165.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	11.29	1.24	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>11.32</b>	<b>1.24</b>	<b>165.8</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>11.32</b>	<b>1.24</b>	<b>165.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 90**  
**Alternative Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/ Day	Miles/ Day/ Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	4	N/A	1.5
Worker Commute	4	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	2.25	0.00	0.00	2.27
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 90**  
**Alternative Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.13</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>163.96</b>	<b>0.01</b>	<b>0.01</b>	<b>165.84</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>	<b>0.00</b>	<b>0.00</b>	<b>0.33</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	1.5	4	1.311	0.131	3.93	0.39	0.01	0.00
Splicing Lab	2	Paved	0	4	0.003	0.001	0.00	0.00	0.00	0.00
Worker Commute	4	Paved	56.5	4	0.003	0.001	0.75	0.18	0.00	0.00
Worker Commute	4	Unpaved	1.5	4	1.102	0.110	6.61	0.66	0.00	0.00
<b>Offsite Total</b>							<b>11.29</b>	<b>1.24</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>11.29</b>	<b>1.24</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 90**  
**Alternative Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Splice Fiber Optic Cable**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 91**  
**Alternative Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Underground Conduit and Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.99	0.30	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>2.20</b>	<b>0.49</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.68	1.45	0.01	0.07	0.02	485.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	19.89	2.16	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>19.96</b>	<b>2.19</b>	<b>485.8</b>
<b>Total</b>	<b>0.90</b>	<b>4.50</b>	<b>7.78</b>	<b>0.02</b>	<b>22.16</b>	<b>2.68</b>	<b>1871.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	9.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>9.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	2.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>2.6</b>
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.05</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>11.6</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	13	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 91**  
**Alternative Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Underground Conduit and Structures**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.01	0.02	0.04	0.00	0.00	0.00	8.92	0.00	0.00	9.0
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.92</b>	<b>0.00</b>	<b>0.00</b>	<b>9.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	13	N/A	1.5
1-Ton Crew Cab Flatbed, 4x4	1	13	N/A	1.5
Water Truck	1	13	N/A	18
Concrete Truck	1	8	N/A	60
Worker Commute	5	13	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45

**Table 91**  
**Alternative Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Underground Conduit and Structures**

<b>Offsite Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>480.53</b>	<b>0.01</b>	<b>0.02</b>	<b>485.82</b>
<b>Total</b>	<b>0.08</b>	<b>1.68</b>	<b>1.45</b>	<b>0.01</b>	<b>0.07</b>	<b>0.02</b>	<b>480.53</b>	<b>0.01</b>	<b>0.02</b>	<b>485.82</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.42
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.86
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.31	0.00	0.00	1.33
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.59</b>	<b>0.00</b>	<b>0.00</b>	<b>2.62</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.59</b>	<b>0.00</b>	<b>0.00</b>	<b>2.62</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	1.5	13	1.102	0.110	1.65	0.17	0.01	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	0	13	0.003	0.001	0.00	0.00	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	13	1.311	0.131	1.97	0.20	0.01	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	0	13	0.003	0.001	0.00	0.00	0.00	0.00
Water Truck	1	Unpaved	1.5	13	2.273	0.227	3.41	0.34	0.02	0.00
Water Truck	1	Paved	16.5	13	0.003	0.001	0.05	0.01	0.00	0.00
Concrete Truck	1	Unpaved	1.5	8	2.273	0.227	3.41	0.34	0.01	0.00
Concrete Truck	1	Paved	58.5	8	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	56.5	13	0.003	0.001	0.94	0.23	0.01	0.00
Worker Commute	5	Unpaved	1.5	13	1.102	0.110	8.26	0.83	0.00	0.00
<b>Offsite Total</b>							<b>19.89</b>	<b>2.16</b>	<b>0.07</b>	<b>0.01</b>
<b>Total</b>							<b>19.89</b>	<b>2.16</b>	<b>0.07</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 91**  
**Alternative Telecommunications Construction Emissions**  
**220 kV/500 kV Towers to Desert View Substation - Underground Conduit and Structures**

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	30	389	6.65E-02	1.01E-02	1.99	0.30	0.01	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.99</b>	<b>0.30</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 3,500 ft. long x 1 ft. wide x 3 ft. deep over 13 days

**Table 92**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install 5 Foot Crossarm**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.76	3.28	8.86	0.02	0.26	0.24	1,716.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.76</b>	<b>3.28</b>	<b>8.86</b>	<b>0.02</b>	<b>0.26</b>	<b>0.24</b>	<b>1716.4</b>
Offsite Motor Vehicle Exhaust	0.09	2.40	0.63	0.00	0.06	0.01	414.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	60.19	6.24	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.40</b>	<b>0.63</b>	<b>0.00</b>	<b>60.25</b>	<b>6.25</b>	<b>414.2</b>
<b>Total</b>	<b>0.85</b>	<b>5.67</b>	<b>9.49</b>	<b>0.02</b>	<b>60.51</b>	<b>6.49</b>	<b>2130.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	5.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>1.2</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.08</b>	<b>0.01</b>	<b>6.4</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	6	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	0.76	3.28	8.86	0.02	0.26	0.24	1701.32	0.07	0.04	1,716.4
<b>Total</b>	<b>0.76</b>	<b>3.28</b>	<b>8.86</b>	<b>0.02</b>	<b>0.26</b>	<b>0.24</b>	<b>1701.32</b>	<b>0.07</b>	<b>0.04</b>	<b>1716.44</b>

**Table 92**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install 5 Foot Crossarm**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.00	0.01	0.03	0.00	0.00	0.00	5.10	0.00	0.00	5.1
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.10</b>	<b>0.00</b>	<b>0.00</b>	<b>5.15</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	6	N/A	11
Bucket Truck	2	6	N/A	11
Worker Commute	8	6	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 92**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install 5 Foot Crossarm**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
Bucket Truck	0.01	0.06	0.36	0.00	0.01	0.01	77.89	0.00	0.00	78.72
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.09</b>	<b>2.40</b>	<b>0.63</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>409.56</b>	<b>0.02</b>	<b>0.01</b>	<b>414.18</b>
<b>Total</b>	<b>0.09</b>	<b>2.40</b>	<b>0.63</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>409.56</b>	<b>0.02</b>	<b>0.01</b>	<b>414.18</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.03
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.24
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	0.97	0.00	0.00	0.98
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.23</b>	<b>0.00</b>	<b>0.00</b>	<b>1.24</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.23</b>	<b>0.00</b>	<b>0.00</b>	<b>1.24</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	6	1.311	0.131	5.24	0.52	0.02	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	7	6	0.003	0.001	0.02	0.01	0.00	0.00
Bucket Truck	2	Unpaved	4	6	2.273	0.227	18.18	1.82	0.05	0.01
Bucket Truck	2	Paved	7	6	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	8	Paved	54	6	0.003	0.001	1.44	0.35	0.00	0.00
Worker Commute	8	Unpaved	4	6	1.102	0.110	35.25	3.53	0.00	0.00
<b>Offsite Total</b>							<b>60.19</b>	<b>6.24</b>	<b>0.07</b>	<b>0.01</b>
<b>Total</b>							<b>60.19</b>	<b>6.24</b>	<b>0.07</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 92**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install 5 Foot Crossarm**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 93**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install Down Guys**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.38	1.64	4.43	0.01	0.13	0.12	858.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.38</b>	<b>1.64</b>	<b>4.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.12</b>	<b>858.2</b>
Offsite Motor Vehicle Exhaust	0.09	2.37	0.45	0.00	0.06	0.01	374.8
Offsite Motor Vehicle Fugitive PM	--	--	--	--	51.07	5.32	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.37</b>	<b>0.45</b>	<b>0.00</b>	<b>51.13</b>	<b>5.33</b>	<b>374.8</b>
<b>Total</b>	<b>0.47</b>	<b>4.00</b>	<b>4.88</b>	<b>0.01</b>	<b>51.26</b>	<b>5.45</b>	<b>1233.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.02	0.00	0.00	0.00	3.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.4</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.06	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>1.5</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>4.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	1	8	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	0.38	1.64	4.43	0.01	0.13	0.12	850.66	0.03	0.02	858.2
<b>Total</b>	<b>0.38</b>	<b>1.64</b>	<b>4.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.12</b>	<b>850.66</b>	<b>0.03</b>	<b>0.02</b>	<b>858.22</b>

**Table 93**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install Down Guys**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.00	0.01	0.02	0.00	0.00	0.00	3.40	0.00	0.00	3.4
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.40</b>	<b>0.00</b>	<b>0.00</b>	<b>3.43</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	8	N/A	11
Bucket Truck	1	8	N/A	11
Worker Commute	8	8	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 93**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install Down Guys**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
Bucket Truck	0.00	0.03	0.18	0.00	0.01	0.00	38.94	0.00	0.00	39.36
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.09</b>	<b>2.37</b>	<b>0.45</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>370.61</b>	<b>0.02</b>	<b>0.01</b>	<b>374.82</b>
<b>Total</b>	<b>0.09</b>	<b>2.37</b>	<b>0.45</b>	<b>0.00</b>	<b>0.06</b>	<b>0.01</b>	<b>370.61</b>	<b>0.02</b>	<b>0.01</b>	<b>374.82</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.16
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.29	0.00	0.00	1.31
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.48</b>	<b>0.00</b>	<b>0.00</b>	<b>1.50</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.48</b>	<b>0.00</b>	<b>0.00</b>	<b>1.50</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	8	1.311	0.131	5.24	0.52	0.02	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	7	8	0.003	0.001	0.02	0.01	0.00	0.00
Bucket Truck	1	Unpaved	4	8	2.273	0.227	9.09	0.91	0.04	0.00
Bucket Truck	1	Paved	7	8	0.003	0.001	0.02	0.01	0.00	0.00
Worker Commute	8	Paved	54	8	0.003	0.001	1.44	0.35	0.01	0.00
Worker Commute	8	Unpaved	4	8	1.102	0.110	35.25	3.53	0.00	0.00
<b>Offsite Total</b>							<b>51.07</b>	<b>5.32</b>	<b>0.06</b>	<b>0.01</b>
<b>Total</b>							<b>51.07</b>	<b>5.32</b>	<b>0.06</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 93**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install Down Guys**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 94**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.05	1.23	0.50	0.00	0.04	0.01	250.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	41.84	4.30	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.23</b>	<b>0.50</b>	<b>0.00</b>	<b>41.88</b>	<b>4.31</b>	<b>250.6</b>
<b>Total</b>	<b>1.57</b>	<b>7.79</b>	<b>18.21</b>	<b>0.04</b>	<b>42.41</b>	<b>4.79</b>	<b>3683.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.03	0.11	0.31	0.00	0.01	0.01	60.1
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.03</b>	<b>0.11</b>	<b>0.31</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>60.1</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	4.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.42	0.04	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.42</b>	<b>0.04</b>	<b>4.4</b>
<b>Total</b>	<b>0.03</b>	<b>0.14</b>	<b>0.32</b>	<b>0.00</b>	<b>0.43</b>	<b>0.05</b>	<b>64.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	35	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>

**Table 94**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.03	0.11	0.31	0.00	0.01	0.01	59.55	0.00	0.00	60.1
<b>Total</b>	<b>0.03</b>	<b>0.11</b>	<b>0.31</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>59.55</b>	<b>0.00</b>	<b>0.00</b>	<b>60.08</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	35	N/A	11
Bucket Truck	2	35	N/A	11
Worker Commute	4	35	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 94**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install Cable**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
Bucket Truck	0.01	0.06	0.36	0.00	0.01	0.01	77.89	0.00	0.00	78.72
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.05</b>	<b>1.23</b>	<b>0.50</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>247.84</b>	<b>0.01</b>	<b>0.01</b>	<b>250.62</b>
<b>Total</b>	<b>0.05</b>	<b>1.23</b>	<b>0.50</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>247.84</b>	<b>0.01</b>	<b>0.01</b>	<b>250.62</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.15
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.36	0.00	0.00	1.38
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.83	0.00	0.00	2.86
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.34</b>	<b>0.00</b>	<b>0.00</b>	<b>4.39</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.34</b>	<b>0.00</b>	<b>0.00</b>	<b>4.39</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	35	1.311	0.131	5.24	0.52	0.09	0.01
1-Ton Crew Cab Flatbed, 4x4	1	Paved	7	35	0.003	0.001	0.02	0.01	0.00	0.00
Bucket Truck	2	Unpaved	4	35	2.273	0.227	18.18	1.82	0.32	0.03
Bucket Truck	2	Paved	7	35	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	4	Paved	54	35	0.003	0.001	0.72	0.18	0.01	0.00
Worker Commute	4	Unpaved	4	35	1.102	0.110	17.63	1.76	0.00	0.00
<b>Offsite Total</b>							<b>41.84</b>	<b>4.30</b>	<b>0.42</b>	<b>0.04</b>
<b>Total</b>							<b>41.84</b>	<b>4.30</b>	<b>0.42</b>	<b>0.04</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 94**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Install Cable**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 95**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.17	0.15	0.00	0.03	0.00	180.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	28.88	3.00	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>28.90</b>	<b>3.00</b>	<b>180.2</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>28.90</b>	<b>3.00</b>	<b>180.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.04	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>0.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>0.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 95**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	8	N/A	11
Worker Commute	4	8	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.01	0.02	0.00	0.00	0.00	16.47	0.00	0.00	16.67
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 95**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>178.19</b>	<b>0.01</b>	<b>0.01</b>	<b>180.23</b>
<b>Total</b>	<b>0.04</b>	<b>1.17</b>	<b>0.15</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>178.19</b>	<b>0.01</b>	<b>0.01</b>	<b>180.23</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.65
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.72</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.72</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Unpaved	4	8	1.311	0.131	10.48	1.05	0.04	0.00
Splicing Lab	2	Paved	7	8	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	4	Paved	54	8	0.003	0.001	0.72	0.18	0.00	0.00
Worker Commute	4	Unpaved	4	8	1.102	0.110	17.63	1.76	0.00	0.00
<b>Offsite Total</b>							<b>28.88</b>	<b>3.00</b>	<b>0.04</b>	<b>0.00</b>
<b>Total</b>							<b>28.88</b>	<b>3.00</b>	<b>0.04</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 95**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Splice Fiber Optic Cable**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 96**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Underground Conduit from Pole to Pole**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.33	0.20	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>1.54</b>	<b>0.39</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.09	1.69	1.48	0.01	0.08	0.03	500.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	31.64	3.34	
<b>Offsite Total</b>	<b>0.09</b>	<b>1.69</b>	<b>1.48</b>	<b>0.01</b>	<b>31.72</b>	<b>3.37</b>	<b>500.2</b>
<b>Total</b>	<b>0.90</b>	<b>4.51</b>	<b>7.80</b>	<b>0.02</b>	<b>33.25</b>	<b>3.76</b>	<b>1885.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	6.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>6.2</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	1.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.10	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.10</b>	<b>0.01</b>	<b>1.9</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>0.00</b>	<b>0.11</b>	<b>0.01</b>	<b>8.2</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	9	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 96**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Underground Conduit from Pole to Pole**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.01	0.03	0.00	0.00	0.00	6.18	0.00	0.00	6.2
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>6.18</b>	<b>0.00</b>	<b>0.00</b>	<b>6.23</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	9	N/A	11
1-Ton Crew Cab Flatbed, 4x4	1	9	N/A	11
Water Truck	1	9	N/A	18
Concrete Truck	1	6	N/A	60
Worker Commute	5	9	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.01	0.00	0.00	0.00	8.24	0.00	0.00	8.34
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45

**Table 96**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Underground Conduit from Pole to Pole**

<b>Offsite Total</b>	<b>0.09</b>	<b>1.69</b>	<b>1.48</b>	<b>0.01</b>	<b>0.08</b>	<b>0.03</b>	<b>494.76</b>	<b>0.01</b>	<b>0.02</b>	<b>500.21</b>
<b>Total</b>	<b>0.09</b>	<b>1.69</b>	<b>1.48</b>	<b>0.01</b>	<b>0.08</b>	<b>0.03</b>	<b>494.76</b>	<b>0.01</b>	<b>0.02</b>	<b>500.21</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.29
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	0.91	0.00	0.00	0.92
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.91</b>	<b>0.00</b>	<b>0.00</b>	<b>1.93</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.91</b>	<b>0.00</b>	<b>0.00</b>	<b>1.93</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Unpaved	4	9	1.102	0.110	4.41	0.44	0.02	0.00
3/4-Ton Pick-up Truck, 4x4	1	Paved	7	9	0.003	0.001	0.02	0.01	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	4	9	1.311	0.131	5.24	0.52	0.02	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	7	9	0.003	0.001	0.02	0.01	0.00	0.00
Water Truck	1	Unpaved	4	9	2.273	0.227	9.09	0.91	0.04	0.00
Water Truck	1	Paved	14	9	0.003	0.001	0.05	0.01	0.00	0.00
Concrete Truck	1	Unpaved	1.5	6	2.273	0.227	3.41	0.34	0.01	0.00
Concrete Truck	1	Paved	58.5	6	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Paved	56.5	9	0.003	0.001	0.94	0.23	0.00	0.00
Worker Commute	5	Unpaved	1.5	9	1.102	0.110	8.26	0.83	0.00	0.00
<b>Offsite Total</b>							<b>31.64</b>	<b>3.34</b>	<b>0.10</b>	<b>0.01</b>
<b>Total</b>							<b>31.64</b>	<b>3.34</b>	<b>0.10</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Table 96**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Underground Conduit from Pole to Pole**

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	20	178	6.65E-02	1.01E-02	1.33	0.20	0.01	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.33</b>	<b>0.20</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 1,600 ft. long x 1 ft. wide x 3 ft. deep over 9 days



**Table 97**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Restoration**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.08	2.10	0.55	0.00	0.05	0.01	367.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	32.55	3.46	
<b>Offsite Total</b>	<b>0.08</b>	<b>2.10</b>	<b>0.55</b>	<b>0.00</b>	<b>32.61</b>	<b>3.47</b>	<b>367.3</b>
<b>Total</b>	<b>0.08</b>	<b>2.10</b>	<b>0.55</b>	<b>0.00</b>	<b>32.61</b>	<b>3.47</b>	<b>367.3</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.07	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>1.3</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>1.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None	200	1	9	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 97**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Restoration**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab, 4x4	2	7	N/A	11
Water Truck	1	7	N/A	18
Worker Commute	7	7	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 97**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Restoration**

1-Ton Crew Cab, 4x4	0.00	0.01	0.02	0.00	0.00	0.00	16.47	0.00	0.00	16.67
Water Truck	0.01	0.05	0.30	0.00	0.01	0.01	63.72	0.00	0.00	64.41
Worker Commute	0.07	2.04	0.22	0.00	0.04	0.00	283.01	0.02	0.01	286.24
<b>Offsite Total</b>	<b>0.08</b>	<b>2.10</b>	<b>0.55</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>363.20</b>	<b>0.02</b>	<b>0.01</b>	<b>367.31</b>
<b>Total</b>	<b>0.08</b>	<b>2.10</b>	<b>0.55</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>363.20</b>	<b>0.02</b>	<b>0.01</b>	<b>367.31</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.06
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.23
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	0.99	0.00	0.00	1.00
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.27</b>	<b>0.00</b>	<b>0.00</b>	<b>1.29</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.27</b>	<b>0.00</b>	<b>0.00</b>	<b>1.29</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	2	Unpaved	4	7	1.311	0.131	10.48	1.05	0.04	0.00
1-Ton Crew Cab, 4x4	2	Paved	7	7	0.003	0.001	0.05	0.01	0.00	0.00
Water Truck	1	Unpaved	4	7	2.273	0.227	9.09	0.91	0.03	0.00
Water Truck	1	Paved	14	7	0.003	0.001	0.05	0.01	0.00	0.00
Worker Commute	7	Paved	56.5	7	0.003	0.001	1.32	0.32	0.00	0.00
Worker Commute	7	Unpaved	1.5	7	1.102	0.110	11.57	1.16	0.00	0.00
<b>Offsite Total</b>							<b>32.55</b>	<b>3.46</b>	<b>0.07</b>	<b>0.01</b>
<b>Total</b>							<b>32.55</b>	<b>3.46</b>	<b>0.07</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 97**  
**Alternative Telecommunications Construction Emissions**  
**Apple Valley to Desert View Substation - Restoration**

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 98**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install 5 Foot Crossarm**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.11	2.51	1.25	0.01	0.08	0.02	556.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.83	0.45	
<b>Offsite Total</b>	<b>0.11</b>	<b>2.51</b>	<b>1.25</b>	<b>0.01</b>	<b>1.92</b>	<b>0.47</b>	<b>556.6</b>
<b>Total</b>	<b>1.63</b>	<b>9.06</b>	<b>18.96</b>	<b>0.04</b>	<b>2.44</b>	<b>0.96</b>	<b>3989.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.07	0.18	0.00	0.01	0.00	34.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.18</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.03	0.01	0.00	0.00	0.00	5.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>5.6</b>
<b>Total</b>	<b>0.02</b>	<b>0.09</b>	<b>0.19</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>39.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	20	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>

**Table 98**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install 5 Foot Crossarm**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.02	0.07	0.18	0.00	0.01	0.00	34.03	0.00	0.00	34.3
<b>Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.18</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>34.03</b>	<b>0.00</b>	<b>0.00</b>	<b>34.33</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	20	N/A	29
Bucket Truck	2	20	N/A	29
Worker Commute	8	20	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 98**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install 5 Foot Crossarm**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
Bucket Truck	0.02	0.17	0.96	0.00	0.03	0.02	205.33	0.00	0.01	207.53
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.11</b>	<b>2.51</b>	<b>1.25</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>550.49</b>	<b>0.02</b>	<b>0.02</b>	<b>556.63</b>
<b>Total</b>	<b>0.11</b>	<b>2.51</b>	<b>1.25</b>	<b>0.01</b>	<b>0.08</b>	<b>0.02</b>	<b>550.49</b>	<b>0.02</b>	<b>0.02</b>	<b>556.63</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.22
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.05	0.00	0.00	2.08
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	3.23	0.00	0.00	3.27
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.50</b>	<b>0.00</b>	<b>0.00</b>	<b>5.57</b>
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.50</b>	<b>0.00</b>	<b>0.00</b>	<b>5.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Paved	29	20	0.003	0.001	0.10	0.02	0.00	0.00
Bucket Truck	2	Paved	29	20	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	8	Paved	58	20	0.003	0.001	1.54	0.38	0.02	0.00
<b>Offsite Total</b>							<b>1.83</b>	<b>0.45</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>1.83</b>	<b>0.45</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 98**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install 5 Foot Crossarm**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 99**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Replacement Wood Pole Haul/Install**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.40	14.50	31.28	0.07	0.98	0.91	7,395.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.40</b>	<b>14.50</b>	<b>31.28</b>	<b>0.07</b>	<b>0.98</b>	<b>0.91</b>	<b>7395.8</b>
Offsite Motor Vehicle Exhaust	0.14	2.69	2.27	0.01	0.12	0.04	808.1
Offsite Motor Vehicle Fugitive PM	--	--	--	--	2.22	0.55	
<b>Offsite Total</b>	<b>0.14</b>	<b>2.69</b>	<b>2.27</b>	<b>0.01</b>	<b>2.34</b>	<b>0.59</b>	<b>808.1</b>
<b>Total</b>	<b>3.54</b>	<b>17.19</b>	<b>33.55</b>	<b>0.08</b>	<b>3.33</b>	<b>1.49</b>	<b>8203.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.02	0.07	0.16	0.00	0.00	0.00	37.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>37.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.01	0.00	0.00	0.00	4.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>4.0</b>
<b>Total</b>	<b>0.02</b>	<b>0.09</b>	<b>0.17</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>41.0</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
30-Ton Crane	300	1	10	8
Bucket Truck	300	2	10	8
60' Digger Derrick	300	1	10	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
30-Ton Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
60' Digger Derrick	300	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

**Table 99**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Replacement Wood Pole Haul/Install**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
30-Ton Crane	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
60' Digger Derrick	0.83	4.40	5.00	0.02	0.15	0.14	2488.23	0.07	0.06	2,509.8
<b>Total</b>	<b>3.40</b>	<b>14.50</b>	<b>31.28</b>	<b>0.07</b>	<b>0.98</b>	<b>0.91</b>	<b>7330.39</b>	<b>0.31</b>	<b>0.19</b>	<b>7395.78</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
30-Ton Crane	0.01	0.02	0.04	0.00	0.00	0.00	7.20	0.00	0.00	7.3
Bucket Truck	0.01	0.03	0.09	0.00	0.00	0.00	17.01	0.00	0.00	17.2
60' Digger Derrick	0.00	0.02	0.02	0.00	0.00	0.00	12.44	0.00	0.00	12.5
<b>Total</b>	<b>0.02</b>	<b>0.07</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>36.65</b>	<b>0.00</b>	<b>0.00</b>	<b>36.98</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	2	10	N/A	29
1-Ton Crew Cab Flatbed, 4x4	1	10	N/A	29
Bucket Truck	2	10	N/A	29
Flat Bed Truck w/Derrick	1	10	N/A	29
40-Foot Flat Bed Truck/Trailer	1	10	N/A	29
Worker Commute	8	10	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

**Table 99**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Replacement Wood Pole Haul/Install**

Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck w/Derrick	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
40-Foot Flat Bed Truck/Trailer	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	43.43	0.00	0.00	43.95
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
Bucket Truck	0.02	0.17	0.96	0.00	0.03	0.02	205.33	0.00	0.01	207.53
Flat Bed Truck w/Derrick	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
40-Foot Flat Bed Truck/Trailer	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.14</b>	<b>2.69</b>	<b>2.27</b>	<b>0.01</b>	<b>0.12</b>	<b>0.04</b>	<b>799.25</b>	<b>0.02</b>	<b>0.03</b>	<b>808.11</b>
<b>Total</b>	<b>0.14</b>	<b>2.69</b>	<b>2.27</b>	<b>0.01</b>	<b>0.12</b>	<b>0.04</b>	<b>799.25</b>	<b>0.02</b>	<b>0.03</b>	<b>808.11</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.22
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.11
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	1.03	0.00	0.00	1.04
Flat Bed Truck w/Derrick	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.52
40-Foot Flat Bed Truck/Trailer	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.52
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	1.62	0.00	0.00	1.64
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.04</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.04</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

**Table 99**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Replacement Wood Pole Haul/Install**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	2	Paved	29	10	0.003	0.001	0.19	0.05	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	29	10	0.003	0.001	0.10	0.02	0.00	0.00
Bucket Truck	2	Paved	29	10	0.003	0.001	0.19	0.05	0.00	0.00
Flat Bed Truck w/Derrick	1	Paved	29	10	0.003	0.001	0.10	0.02	0.00	0.00
40-Foot Flat Bed Truck/Trailer	1	Paved	29	10	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	8	Paved	58	10	0.003	0.001	1.54	0.38	0.01	0.00
<b>Offsite Total</b>							<b>2.22</b>	<b>0.55</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>2.22</b>	<b>0.55</b>	<b>0.01</b>	<b>0.00</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 100**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Down Guys**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.38	1.64	4.43	0.01	0.13	0.12	858.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.38</b>	<b>1.64</b>	<b>4.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.12</b>	<b>858.2</b>
Offsite Motor Vehicle Exhaust	0.10	2.42	0.77	0.01	0.07	0.01	452.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.74	0.43	
<b>Offsite Total</b>	<b>0.10</b>	<b>2.42</b>	<b>0.77</b>	<b>0.01</b>	<b>1.81</b>	<b>0.44</b>	<b>452.9</b>
<b>Total</b>	<b>0.47</b>	<b>4.06</b>	<b>5.19</b>	<b>0.01</b>	<b>1.94</b>	<b>0.56</b>	<b>1311.1</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.01	0.00	0.00	0.00	2.6
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.6</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>1.4</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>3.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	1	6	4

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	0.38	1.64	4.43	0.01	0.13	0.12	850.66	0.03	0.02	858.2
<b>Total</b>	<b>0.38</b>	<b>1.64</b>	<b>4.43</b>	<b>0.01</b>	<b>0.13</b>	<b>0.12</b>	<b>850.66</b>	<b>0.03</b>	<b>0.02</b>	<b>858.22</b>

**Table 100**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Down Guys**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	2.55	0.00	0.00	2.6
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.55</b>	<b>0.00</b>	<b>0.00</b>	<b>2.57</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	6	N/A	29
Bucket Truck	1	6	N/A	29
Worker Commute	8	6	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 100**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Down Guys**

1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
Bucket Truck	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.10</b>	<b>2.42</b>	<b>0.77</b>	<b>0.01</b>	<b>0.07</b>	<b>0.01</b>	<b>447.82</b>	<b>0.02</b>	<b>0.01</b>	<b>452.87</b>
<b>Total</b>	<b>0.10</b>	<b>2.42</b>	<b>0.77</b>	<b>0.01</b>	<b>0.07</b>	<b>0.01</b>	<b>447.82</b>	<b>0.02</b>	<b>0.01</b>	<b>452.87</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.31
Worker Commute	0.00	0.01	0.00	0.00	0.00	0.00	0.97	0.00	0.00	0.98
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.34</b>	<b>0.00</b>	<b>0.00</b>	<b>1.36</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.34</b>	<b>0.00</b>	<b>0.00</b>	<b>1.36</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Paved	29	6	0.003	0.001	0.10	0.02	0.00	0.00
Bucket Truck	1	Paved	29	6	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	8	Paved	58	6	0.003	0.001	1.54	0.38	0.00	0.00
<b>Offsite Total</b>							<b>1.74</b>	<b>0.43</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>1.74</b>	<b>0.43</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 100**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Down Guys**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 101**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.52	6.55	17.71	0.03	0.53	0.48	3,432.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3432.9</b>
Offsite Motor Vehicle Exhaust	0.11	2.52	1.28	0.01	0.09	0.02	578.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.93	0.47	
<b>Offsite Total</b>	<b>0.11</b>	<b>2.52</b>	<b>1.28</b>	<b>0.01</b>	<b>2.02</b>	<b>0.50</b>	<b>578.6</b>
<b>Total</b>	<b>1.63</b>	<b>9.07</b>	<b>18.99</b>	<b>0.04</b>	<b>2.55</b>	<b>0.98</b>	<b>4011.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.06	0.16	0.00	0.00	0.00	30.9
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>30.9</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	5.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>5.2</b>
<b>Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.17</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>36.1</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	2	18	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	1.52	6.55	17.71	0.03	0.53	0.48	3402.64	0.14	0.09	3,432.9
<b>Total</b>	<b>1.52</b>	<b>6.55</b>	<b>17.71</b>	<b>0.03</b>	<b>0.53</b>	<b>0.48</b>	<b>3402.64</b>	<b>0.14</b>	<b>0.09</b>	<b>3432.87</b>

**Table 101**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.01	0.06	0.16	0.00	0.00	0.00	30.62	0.00	0.00	30.9
<b>Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.16</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>30.62</b>	<b>0.00</b>	<b>0.00</b>	<b>30.90</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	2	18	N/A	29
Bucket Truck	2	18	N/A	29
Worker Commute	8	18	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 101**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Cable**

3/4-Ton Pick-up Truck, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	43.43	0.00	0.00	43.95
Bucket Truck	0.02	0.17	0.96	0.00	0.03	0.02	205.33	0.00	0.01	207.53
Worker Commute	0.08	2.33	0.25	0.00	0.05	0.00	323.43	0.02	0.01	327.13
<b>Offsite Total</b>	<b>0.11</b>	<b>2.52</b>	<b>1.28</b>	<b>0.01</b>	<b>0.09</b>	<b>0.02</b>	<b>572.20</b>	<b>0.02</b>	<b>0.02</b>	<b>578.60</b>
<b>Total</b>	<b>0.11</b>	<b>2.52</b>	<b>1.28</b>	<b>0.01</b>	<b>0.09</b>	<b>0.02</b>	<b>572.20</b>	<b>0.02</b>	<b>0.02</b>	<b>578.60</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.40
Bucket Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.85	0.00	0.00	1.87
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.91	0.00	0.00	2.94
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.15</b>	<b>0.00</b>	<b>0.00</b>	<b>5.21</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.15</b>	<b>0.00</b>	<b>0.00</b>	<b>5.21</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	2	Paved	29	18	0.003	0.001	0.19	0.05	0.00	0.00
Bucket Truck	2	Paved	29	18	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	8	Paved	58	18	0.003	0.001	1.54	0.38	0.01	0.00
<b>Offsite Total</b>							<b>1.93</b>	<b>0.47</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>1.93</b>	<b>0.47</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 101**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Install Cable**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 102**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Splice Fiber Optic Cable**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.04	1.19	0.19	0.00	0.03	0.00	207.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.97	0.24	
<b>Offsite Total</b>	<b>0.04</b>	<b>1.19</b>	<b>0.19</b>	<b>0.00</b>	<b>1.00</b>	<b>0.24</b>	<b>207.5</b>
<b>Total</b>	<b>0.04</b>	<b>1.19</b>	<b>0.19</b>	<b>0.00</b>	<b>1.00</b>	<b>0.24</b>	<b>207.5</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.00	0.00	0.00	0.00	3.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.5</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>3.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None				

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 102**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Splice Fiber Optic Cable**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
Splicing Lab	2	34	N/A	29
Worker Commute	4	34	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
Splicing Lab	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.02	0.06	0.00	0.01	0.00	43.43	0.00	0.00	43.95
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56

**Table 102**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Splice Fiber Optic Cable**

<b>Offsite Total</b>	<b>0.04</b>	<b>1.19</b>	<b>0.19</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>205.15</b>	<b>0.01</b>	<b>0.01</b>	<b>207.51</b>
<b>Total</b>	<b>0.04</b>	<b>1.19</b>	<b>0.19</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>205.15</b>	<b>0.01</b>	<b>0.01</b>	<b>207.51</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.75
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.75	0.00	0.00	2.78
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.49</b>	<b>0.00</b>	<b>0.00</b>	<b>3.53</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.49</b>	<b>0.00</b>	<b>0.00</b>	<b>3.53</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
Splicing Lab	2	Paved	29	34	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	4	Paved	58	34	0.003	0.001	0.77	0.19	0.01	0.00
<b>Offsite Total</b>							<b>0.97</b>	<b>0.24</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>0.97</b>	<b>0.24</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>

**Table 102**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Splice Fiber Optic Cable**

Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 103**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Underground Conduit & Structures**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.82	2.82	6.32	0.02	0.21	0.19	1,385.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	1.33	0.20	
<b>Onsite Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>1.54</b>	<b>0.39</b>	<b>1385.3</b>
Offsite Motor Vehicle Exhaust	0.08	1.64	1.18	0.00	0.07	0.02	455.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.35	0.33	
<b>Offsite Total</b>	<b>0.08</b>	<b>1.64</b>	<b>1.18</b>	<b>0.00</b>	<b>1.42</b>	<b>0.35</b>	<b>455.9</b>
<b>Total</b>	<b>0.90</b>	<b>4.47</b>	<b>7.51</b>	<b>0.02</b>	<b>2.96</b>	<b>0.75</b>	<b>1841.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.04	0.08	0.00	0.00	0.00	17.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.01	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.04</b>	<b>0.08</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>17.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	5.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>5.2</b>
<b>Total</b>	<b>0.01</b>	<b>0.06</b>	<b>0.09</b>	<b>0.00</b>	<b>0.03</b>	<b>0.01</b>	<b>22.5</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	200	1	25	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	200	0.102	0.353	0.790	0.002	0.026	0.024	171.583	0.009	0.004	Tractors/Loaders/Backhoes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	0.82	2.82	6.32	0.02	0.21	0.19	1372.66	0.07	0.04	1,385.3
<b>Total</b>	<b>0.82</b>	<b>2.82</b>	<b>6.32</b>	<b>0.02</b>	<b>0.21</b>	<b>0.19</b>	<b>1372.66</b>	<b>0.07</b>	<b>0.04</b>	<b>1385.26</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

**Table 103**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Underground Conduit & Structures**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.01	0.04	0.08	0.00	0.00	0.00	17.16	0.00	0.00	17.3
<b>Total</b>	<b>0.01</b>	<b>0.04</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>17.16</b>	<b>0.00</b>	<b>0.00</b>	<b>17.32</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
3/4-Ton Pick-up Truck, 4x4	1	25	N/A	29
1-Ton Crew Cab Flatbed, 4x4	1	25	N/A	29
Water Truck	1	25	N/A	29
Concrete Truck	1	16	N/A	29
Worker Commute	5	25	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
1-Ton Crew Cab Flatbed, 4x4	0.00	0.01	0.03	0.00	0.00	0.00	21.72	0.00	0.00	21.97
Water Truck	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
Concrete Truck	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45

**Table 103**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Underground Conduit & Structures**

<b>Offsite Total</b>	<b>0.08</b>	<b>1.64</b>	<b>1.18</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>450.91</b>	<b>0.01</b>	<b>0.02</b>	<b>455.93</b>
<b>Total</b>	<b>0.08</b>	<b>1.64</b>	<b>1.18</b>	<b>0.00</b>	<b>0.07</b>	<b>0.02</b>	<b>450.91</b>	<b>0.01</b>	<b>0.02</b>	<b>455.93</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.27
Water Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.28	0.00	0.00	1.30
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.83
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.53	0.00	0.00	2.56
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.17</b>	<b>0.00</b>	<b>0.00</b>	<b>5.23</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>5.17</b>	<b>0.00</b>	<b>0.00</b>	<b>5.23</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
3/4-Ton Pick-up Truck, 4x4	1	Paved	29	25	0.003	0.001	0.10	0.02	0.00	0.00
1-Ton Crew Cab Flatbed, 4x4	1	Paved	29	25	0.003	0.001	0.10	0.02	0.00	0.00
Water Truck	1	Paved	29	25	0.003	0.001	0.10	0.02	0.00	0.00
Concrete Truck	1	Paved	29	16	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	5	Paved	58	25	0.003	0.001	0.97	0.24	0.01	0.00
<b>Offsite Total</b>							<b>1.35</b>	<b>0.33</b>	<b>0.02</b>	<b>0.00</b>
<b>Total</b>							<b>1.35</b>	<b>0.33</b>	<b>0.02</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 103**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Underground Conduit & Structures**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling <sup>d</sup>	CY	20	178	6.65E-02	1.01E-02	1.33	0.20	0.01	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>1.33</b>	<b>0.20</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

<sup>d</sup> Based on excavating 1,600 ft. long x 1 ft. wide x 3 ft. deep over 9 days

**Table 104**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Restoration**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.09	2.14	0.77	0.00	0.07	0.01	433.9
Offsite Motor Vehicle Fugitive PM	--	--	--	--	1.64	0.40	
<b>Offsite Total</b>	<b>0.09</b>	<b>2.14</b>	<b>0.77</b>	<b>0.00</b>	<b>1.71</b>	<b>0.42</b>	<b>433.9</b>
<b>Total</b>	<b>0.09</b>	<b>2.14</b>	<b>0.77</b>	<b>0.00</b>	<b>1.71</b>	<b>0.42</b>	<b>433.9</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.0</b>
Offsite Motor Vehicle Exhaust	0.00	0.02	0.01	0.00	0.00	0.00	3.7
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>3.7</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>3.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
None	200	1	9	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
None	200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Table 104**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Restoration**

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab, 4x4	2	17	N/A	29
Water Truck	1	17	N/A	29
Worker Commute	7	17	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Water Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										

**Table 104**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Restoration**

1-Ton Crew Cab, 4x4	0.00	0.02	0.06	0.00	0.01	0.00	43.43	0.00	0.00	43.95
Water Truck	0.01	0.08	0.48	0.00	0.02	0.01	102.67	0.00	0.00	103.76
Worker Commute	0.07	2.04	0.22	0.00	0.04	0.00	283.01	0.02	0.01	286.24
<b>Offsite Total</b>	<b>0.09</b>	<b>2.14</b>	<b>0.77</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>429.11</b>	<b>0.02</b>	<b>0.01</b>	<b>433.95</b>
<b>Total</b>	<b>0.09</b>	<b>2.14</b>	<b>0.77</b>	<b>0.00</b>	<b>0.07</b>	<b>0.01</b>	<b>429.11</b>	<b>0.02</b>	<b>0.01</b>	<b>433.95</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.37
Water Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.00	0.88
Worker Commute	0.00	0.02	0.00	0.00	0.00	0.00	2.41	0.00	0.00	2.43
<b>Offsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.65</b>	<b>0.00</b>	<b>0.00</b>	<b>3.69</b>
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.65</b>	<b>0.00</b>	<b>0.00</b>	<b>3.69</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Unpaved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	2	Paved	29	17	0.003	0.001	0.19	0.05	0.00	0.00
Water Truck	1	Paved	29	17	0.003	0.001	0.10	0.02	0.00	0.00
Worker Commute	7	Paved	58	17	0.003	0.001	1.35	0.33	0.01	0.00
<b>Offsite Total</b>							<b>1.64</b>	<b>0.40</b>	<b>0.01</b>	<b>0.00</b>
<b>Total</b>							<b>1.64</b>	<b>0.40</b>	<b>0.01</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 104**  
**Alternative Telecommunications Construction Emissions**  
**Gale to Pisgah Fiber Optic Cable - Restoration**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 105**  
**Alternative Telecommunications Construction Emissions**  
**Construct Coolwater Microwave Tower**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	3.79	14.31	27.06	0.08	0.94	0.86	7,144.5
Onsite Motor Vehicle Exhaust	0.00	0.01	0.03	0.00	0.00	0.00	8.3
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.01	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>3.79</b>	<b>14.32</b>	<b>27.10</b>	<b>0.08</b>	<b>0.95</b>	<b>0.87</b>	<b>7152.8</b>
Offsite Motor Vehicle Exhaust	0.07	1.34	1.12	0.00	0.06	0.02	378.2
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.97	0.24	
<b>Offsite Total</b>	<b>0.07</b>	<b>1.34</b>	<b>1.12</b>	<b>0.00</b>	<b>1.03</b>	<b>0.26</b>	<b>378.2</b>
<b>Total</b>	<b>3.86</b>	<b>15.65</b>	<b>28.22</b>	<b>0.08</b>	<b>1.98</b>	<b>1.12</b>	<b>7531.0</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.05	0.09	0.00	0.00	0.00	23.5
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.5</b>
Offsite Motor Vehicle Exhaust	0.00	0.03	0.00	0.00	0.00	0.00	4.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.02	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>4.3</b>
<b>Total</b>	<b>0.01</b>	<b>0.08</b>	<b>0.09</b>	<b>0.00</b>	<b>0.02</b>	<b>0.01</b>	<b>27.8</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Crane	300	1	8	6
Drill Rig	350	1	7	6
Concrete Pump	350	1	2	6
Forklift	300	1	10	4
Backhoe/Front Loader	300	1	10	6

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Crane	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Drill Rig	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs
Concrete Pump	350	0.157	0.667	1.801	0.003	0.054	0.050	344.895	0.014	0.009	Pumps
Forklift	300	0.069	0.215	0.451	0.001	0.016	0.015	110.880	0.006	0.003	Forklifts
Backhoe/Front Loader	300	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes

<sup>a</sup> From Table 110

**Construction Equipment Daily Exhaust Emissions**

**Table 105**  
**Alternative Telecommunications Construction Emissions**  
**Construct Coolwater Microwave Tower**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Crane	0.79	2.66	6.43	0.01	0.23	0.21	1079.64	0.07	0.03	1,089.8
Drill Rig	0.62	3.30	3.75	0.02	0.11	0.10	1866.17	0.06	0.05	1,882.3
Concrete Pump	1.19	4.17	8.44	0.02	0.30	0.27	2067.26	0.11	0.05	2,086.1
Forklift	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Backhoe/Front Loader	1.19	4.17	8.44	0.02	0.30	0.27	2067.26	0.11	0.05	2,086.1
<b>Total</b>	<b>3.79</b>	<b>14.31</b>	<b>27.06</b>	<b>0.08</b>	<b>0.94</b>	<b>0.86</b>	<b>7080.34</b>	<b>0.34</b>	<b>0.18</b>	<b>7144.48</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Crane	0.00	0.01	0.03	0.00	0.00	0.00	4.32	0.00	0.00	4.4
Drill Rig	0.00	0.01	0.01	0.00	0.00	0.00	6.53	0.00	0.00	6.6
Concrete Pump	0.00	0.00	0.01	0.00	0.00	0.00	2.07	0.00	0.00	2.1
Forklift	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Backhoe/Front Loader	0.01	0.02	0.04	0.00	0.00	0.00	10.34	0.00	0.00	10.4
<b>Total</b>	<b>0.01</b>	<b>0.05</b>	<b>0.09</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.25</b>	<b>0.00</b>	<b>0.00</b>	<b>23.46</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
3/4-Ton Pick-up Truck, 4x4	2	40	N/A	0.5
Flatbed Truck	2	7	N/A	0.5
Dump Truck	1	7	N/A	0.5
2 Ton Truck	1	15	N/A	0.5
Concrete Truck	1	2	N/A	0.5
<b>Offsite</b>				
Concrete Truck	1	2	N/A	60
Worker Commute	4	50	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
3/4-Ton Pick-up Truck, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Flatbed Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Dump Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
2 Ton Truck	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05

**Table 105**  
**Alternative Telecommunications Construction Emissions**  
**Construct Coolwater Microwave Tower**

Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
<b>Offsite</b>										
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.76
Flatbed Truck	0.00	0.00	0.02	0.00	0.00	0.00	3.54	0.00	0.00	3.58
Dump Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
2 Ton Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.38
Concrete Truck	0.00	0.00	0.01	0.00	0.00	0.00	1.77	0.00	0.00	1.79
<b>Onsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>8.20</b>	<b>0.00</b>	<b>0.00</b>	<b>8.29</b>
<b>Offsite</b>										
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.04	1.17	0.13	0.00	0.02	0.00	161.72	0.01	0.01	163.56
<b>Offsite Total</b>	<b>0.07</b>	<b>1.34</b>	<b>1.12</b>	<b>0.00</b>	<b>0.06</b>	<b>0.02</b>	<b>374.13</b>	<b>0.01</b>	<b>0.01</b>	<b>378.25</b>
<b>Total</b>	<b>0.07</b>	<b>1.34</b>	<b>1.16</b>	<b>0.00</b>	<b>0.06</b>	<b>0.02</b>	<b>382.34</b>	<b>0.01</b>	<b>0.01</b>	<b>386.54</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
3/4-Ton Pick-up Truck, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02
Flatbed Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Dump Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
2 Ton Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>
<b>Offsite</b>										
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Worker Commute	0.00	0.03	0.00	0.00	0.00	0.00	4.04	0.00	0.00	4.09
<b>Offsite Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.26</b>	<b>0.00</b>	<b>0.00</b>	<b>4.30</b>
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.29</b>	<b>0.00</b>	<b>0.00</b>	<b>4.34</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
---------	--------	-----------	---------------------------	-----------	--	---	--	---	--	---

**Table 105**  
**Alternative Telecommunications Construction Emissions**  
**Construct Coolwater Microwave Tower**

<b>Onsite</b>											
3/4-Ton Pick-up Truck, 4x4	2	Paved	0.5	40	0.003	0.001	0.00	0.00	0.00	0.00	0.00
Flatbed Truck	2	Paved	0.5	7	0.003	0.001	0.00	0.00	0.00	0.00	0.00
Dump Truck	1	Paved	0.5	7	0.003	0.001	0.00	0.00	0.00	0.00	0.00
2 Ton Truck	1	Paved	0.5	15	0.003	0.001	0.00	0.00	0.00	0.00	0.00
Concrete Truck	1	Paved	0.5	2	0.003	0.001	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>											
Concrete Truck	1	Paved	60	2	0.003	0.001	0.20	0.05	0.00	0.00	0.00
Worker Commute	4	Paved	58	50	0.003	0.001	0.77	0.19	0.02	0.00	0.00
<b>Offsite Total</b>							<b>0.97</b>	<b>0.24</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>
<b>Total</b>							<b>0.98</b>	<b>0.24</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 106**  
**Distribution for Station Light & Power Construction Emissions**  
**Overhead Construction**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	1.58	7.68	13.85	0.04	0.41	0.38	4,226.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>1.58</b>	<b>7.68</b>	<b>13.85</b>	<b>0.04</b>	<b>0.41</b>	<b>0.38</b>	<b>4226.2</b>
Offsite Motor Vehicle Exhaust	0.05	1.46	0.19	0.00	0.03	0.00	211.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	14.60	1.60	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.46</b>	<b>0.19</b>	<b>0.00</b>	<b>14.63</b>	<b>1.60</b>	<b>211.0</b>
<b>Total</b>	<b>1.64</b>	<b>9.14</b>	<b>14.04</b>	<b>0.04</b>	<b>15.05</b>	<b>1.98</b>	<b>4437.2</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.00	0.02	0.04	0.00	0.00	0.00	12.7
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.7</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.6
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.04	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.6</b>
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.04</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>13.3</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	1	6	8
60' Digger Derrick	350	1	6	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.095	0.410	1.107	0.002	0.033	0.030	212.665	0.009	0.006	Aerial Lifts
60' Digger Derrick	350	0.103	0.551	0.625	0.003	0.019	0.017	311.029	0.009	0.008	Bore/Drill Rigs

<sup>a</sup> From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Bucket Truck	0.76	3.28	8.86	0.02	0.26	0.24	1701.32	0.07	0.04	1,716.4
60' Digger Derrick	0.83	4.40	5.00	0.02	0.15	0.14	2488.23	0.07	0.06	2,509.8
<b>Total</b>	<b>1.58</b>	<b>7.68</b>	<b>13.85</b>	<b>0.04</b>	<b>0.41</b>	<b>0.38</b>	<b>4189.55</b>	<b>0.14</b>	<b>0.11</b>	<b>4226.22</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 106**  
**Distribution for Station Light & Power Construction Emissions**  
**Overhead Construction**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.00	0.01	0.03	0.00	0.00	0.00	5.10	0.00	0.00	5.1
60' Digger Derrick	0.00	0.01	0.01	0.00	0.00	0.00	7.46	0.00	0.00	7.5
<b>Total</b>	<b>0.00</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>12.57</b>	<b>0.00</b>	<b>0.00</b>	<b>12.68</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab Flatbed, 4x4	1	6	N/A	1.5
Flat Bed Truck w/Derrick	1	6	N/A	1.5
Worker Commute	5	6	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	MDV Diesel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Flat Bed Truck w/Derrick	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

a From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Flat Bed Truck w/Derrick	0.00	0.00	0.02	0.00	0.00	0.00	5.31	0.00	0.00	5.37
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.05</b>	<b>1.46</b>	<b>0.19</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>208.58</b>	<b>0.01</b>	<b>0.01</b>	<b>210.96</b>
<b>Total</b>	<b>0.05</b>	<b>1.46</b>	<b>0.19</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>208.58</b>	<b>0.01</b>	<b>0.01</b>	<b>210.96</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

**Table 106**  
**Distribution for Station Light & Power Construction Emissions**  
**Overhead Construction**

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flat Bed Truck w/Derrick	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.02
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>	<b>0.00</b>	<b>0.00</b>	<b>0.63</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Paved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab Flatbed, 4x4	1	Unpaved	1.5	6	1.311	0.131	1.97	0.20	0.01	0.00
Flat Bed Truck w/Derrick	1	Unpaved	1.5	6	2.273	0.227	3.41	0.34	0.01	0.00
Worker Commute	5	Unpaved	1.5	6	1.102	0.110	8.26	0.83	0.02	0.00
Worker Commute	5	Paved	58	6	0.003	0.001	0.97	0.24	0.00	0.00
<b>Offsite Total</b>							<b>14.60</b>	<b>1.60</b>	<b>0.04</b>	<b>0.00</b>
<b>Total</b>							<b>14.60</b>	<b>1.60</b>	<b>0.04</b>	<b>0.00</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

**Table 106**  
**Distribution for Station Light & Power Construction Emissions**  
**Overhead Construction**

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 107**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Civil Construction**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.58	9.46	19.58	0.05	0.68	0.62	4,831.8
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.58</b>	<b>9.46</b>	<b>19.58</b>	<b>0.05</b>	<b>0.68</b>	<b>0.62</b>	<b>4831.8</b>
Offsite Motor Vehicle Exhaust	0.10	1.80	2.15	0.01	0.10	0.04	635.0
Offsite Motor Vehicle Fugitive PM	--	--	--	--	18.40	2.04	
<b>Offsite Total</b>	<b>0.10</b>	<b>1.80</b>	<b>2.15</b>	<b>0.01</b>	<b>18.50</b>	<b>2.07</b>	<b>635.0</b>
<b>Total</b>	<b>2.68</b>	<b>11.26</b>	<b>21.73</b>	<b>0.06</b>	<b>19.17</b>	<b>2.70</b>	<b>5466.8</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	10.4
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.4</b>
Offsite Motor Vehicle Exhaust	0.00	0.01	0.00	0.00	0.00	0.00	1.5
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.05	0.01	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>1.5</b>
<b>Total</b>	<b>0.01</b>	<b>0.03</b>	<b>0.05</b>	<b>0.00</b>	<b>0.05</b>	<b>0.01</b>	<b>11.9</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Backhoe/Front Loader	300	1	6	8
Hydraulic Rewind Puller	300	1	2	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Backhoe/Front Loader	300	0.198	0.696	1.407	0.004	0.050	0.046	344.544	0.018	0.009	Tractors/Loaders/Backhoes
Hydraulic Rewind Puller	300	0.124	0.486	1.040	0.002	0.035	0.032	254.010	0.011	0.007	Other Construction Equipment

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
Backhoe/Front Loader	1.59	5.57	11.26	0.03	0.40	0.36	2756.35	0.14	0.07	2,781.5
Hydraulic Rewind Puller	0.99	3.89	8.32	0.02	0.28	0.26	2032.08	0.09	0.05	2,050.3
<b>Total</b>	<b>2.58</b>	<b>9.46</b>	<b>19.58</b>	<b>0.05</b>	<b>0.68</b>	<b>0.62</b>	<b>4788.43</b>	<b>0.23</b>	<b>0.12</b>	<b>4831.83</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Table 107**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Civil Construction**

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Backhoe/Front Loader	0.00	0.02	0.03	0.00	0.00	0.00	8.27	0.00	0.00	8.3
Hydraulic Rewind Puller	0.00	0.00	0.01	0.00	0.00	0.00	2.03	0.00	0.00	2.1
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>10.30</b>	<b>0.00</b>	<b>0.00</b>	<b>10.39</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab, 4x4	1	6	N/A	1.5
Concrete Truck	1	6	N/A	60
Structure Delivery Truck	1	2	N/A	60
Worker Commute	5	6	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	MDV Diesel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Concrete Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Structure Delivery Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Concrete Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Structure Delivery Truck	0.03	0.17	0.99	0.00	0.03	0.02	212.42	0.00	0.01	214.68
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45

**Table 107**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Civil Construction**

<b>Offsite Total</b>	<b>0.10</b>	<b>1.80</b>	<b>2.15</b>	<b>0.01</b>	<b>0.10</b>	<b>0.04</b>	<b>628.10</b>	<b>0.01</b>	<b>0.02</b>	<b>634.96</b>
<b>Total</b>	<b>0.10</b>	<b>1.80</b>	<b>2.15</b>	<b>0.01</b>	<b>0.10</b>	<b>0.04</b>	<b>628.10</b>	<b>0.01</b>	<b>0.02</b>	<b>634.96</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concrete Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00	0.64
Structure Delivery Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	0.61
<b>Offsite Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.46</b>	<b>0.00</b>	<b>0.00</b>	<b>1.48</b>
<b>Total</b>	<b>0.00</b>	<b>0.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.46</b>	<b>0.00</b>	<b>0.00</b>	<b>1.48</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/Day/Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Paved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	1	Unpaved	1.5	6	1.311	0.131	1.97	0.20	0.01	0.00
Concrete Truck	1	Unpaved	1.5	6	2.273	0.227	3.41	0.34	0.01	0.00
Concrete Truck	1	Paved	58.5	6	0.003	0.001	0.19	0.05	0.00	0.00
Structure Delivery Truck	1	Unpaved	1.5	2	2.273	0.227	3.41	0.34	0.00	0.00
Structure Delivery Truck	1	Paved	58.5	2	0.003	0.001	0.19	0.05	0.00	0.00
Worker Commute	5	Unpaved	1.5	6	1.102	0.110	8.26	0.83	0.02	0.00
Worker Commute	5	Paved	58	6	0.003	0.001	0.97	0.24	0.00	0.00
<b>Offsite Total</b>							<b>18.40</b>	<b>2.04</b>	<b>0.05</b>	<b>0.01</b>
<b>Total</b>							<b>18.40</b>	<b>2.04</b>	<b>0.05</b>	<b>0.01</b>

<sup>a</sup> From Table 111

<sup>b</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>c</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

**Table 107**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Civil Construction**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

<sup>a</sup> From Table 114

<sup>b</sup> Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

<sup>c</sup> Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]

**Table 108**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Electrical Construction**

**Daily Emissions Summary**

Source	VOC (lb/day)	CO (lb/day)	NOX (lb/day)	SOX (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)	CO2e (lb/day)
Construction Equipment Exhaust	2.12	7.08	17.14	0.03	0.62	0.57	2,906.2
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>2.12</b>	<b>7.08</b>	<b>17.14</b>	<b>0.03</b>	<b>0.62</b>	<b>0.57</b>	<b>2906.2</b>
Offsite Motor Vehicle Exhaust	0.05	1.47	0.21	0.00	0.03	0.00	216.3
Offsite Motor Vehicle Fugitive PM	--	--	--	--	18.01	1.94	
<b>Offsite Total</b>	<b>0.05</b>	<b>1.47</b>	<b>0.21</b>	<b>0.00</b>	<b>18.05</b>	<b>1.94</b>	<b>216.3</b>
<b>Total</b>	<b>2.17</b>	<b>8.55</b>	<b>17.35</b>	<b>0.03</b>	<b>18.66</b>	<b>2.51</b>	<b>3122.6</b>

**Total Emissions Summary**

Source	VOC (tons)	CO (tons)	NOX (tons)	SOX (tons)	PM10 (tons)	PM2.5 (tons)	CO2e (tons)
Construction Equipment Exhaust	0.01	0.02	0.04	0.00	0.00	0.00	7.3
Onsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Onsite Motor Vehicle Fugitive PM	--	--	--	--	0.00	0.00	
Earthwork Fugitive PM	--	--	--	--	0.00	0.00	
<b>Onsite Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.3</b>
Offsite Motor Vehicle Exhaust	0.00	0.00	0.00	0.00	0.00	0.00	0.4
Offsite Motor Vehicle Fugitive PM	--	--	--	--	0.04	0.00	
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.04</b>	<b>0.00</b>	<b>0.4</b>
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.04</b>	<b>0.01</b>	<b>7.7</b>

**Construction Equipment Summary**

Equipment	Horse-power	Number	Days Used	Hours Used/Day
Bucket Truck	300	1	4	8
Flat Bed Truck w/Derrick	350	1	6	8

**Construction Equipment Exhaust Emission Factors**

Equipment	Horse-power	VOC (lb/hr) <sup>a</sup>	CO (lb/hr) <sup>a</sup>	NOX (lb/hr) <sup>a</sup>	SOX (lb/hr) <sup>a</sup>	PM10 (lb/hr) <sup>a</sup>	PM2.5 (lb/hr) <sup>b</sup>	CO2 (lb/hr) <sup>a</sup>	CH4 (lb/hr) <sup>a</sup>	N2O (lb/hr) <sup>a</sup>	Category
Bucket Truck	300	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes
Flat Bed Truck w/Derrick	350	0.132	0.443	1.071	0.002	0.039	0.036	179.940	0.012	0.005	Cranes

a From Table 110

**Construction Equipment Daily Exhaust Emissions**

Equipment	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
-----------	------------------------------	-----------------------------	------------------------------	------------------------------	-------------------------------	--------------------------------	------------------------------	------------------------------	------------------------------	-------------------------------

**Table 108**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Electrical Construction**

Bucket Truck	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
Flat Bed Truck w/Derrick	1.06	3.54	8.57	0.01	0.31	0.28	1439.52	0.10	0.04	1,453.1
<b>Total</b>	<b>2.12</b>	<b>7.08</b>	<b>17.14</b>	<b>0.03</b>	<b>0.62</b>	<b>0.57</b>	<b>2879.03</b>	<b>0.19</b>	<b>0.07</b>	<b>2906.24</b>

<sup>a</sup> Emissions [lb/day] = number x hours/day x emission factor [lb/hr]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Construction Equipment Total Exhaust Emissions**

Equipment	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
Bucket Truck	0.00	0.01	0.02	0.00	0.00	0.00	2.88	0.00	0.00	2.9
Flat Bed Truck w/Derrick	0.00	0.01	0.03	0.00	0.00	0.00	4.32	0.00	0.00	4.4
<b>Total</b>	<b>0.01</b>	<b>0.02</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7.20</b>	<b>0.00</b>	<b>0.00</b>	<b>7.27</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Usage**

Vehicle	Number <sup>a</sup>	Days Used	Hours Used/Day	Miles/Day/Veh.
<b>Onsite</b>				
None				
<b>Offsite</b>				
1-Ton Crew Cab, 4x4	1	4	N/A	1.5
Bucket Truck	1	4	N/A	1.5
Flat Bed Truck w/Derrick	1	4	N/A	1.5
Worker Commute	5	4	N/A	58

<sup>a</sup> Concrete trucks based on 25,350 CY over 60 days and 10 CY/truck

Gravel delivery truck based on 42,550 CU over 60 days and 7.3 CY/truck

**Motor Vehicle Exhaust Emission Factors**

Vehicle	Category	VOC (lb/mi) <sup>a</sup>	CO (lb/mi) <sup>a</sup>	NOX (lb/mi) <sup>a</sup>	SOX (lb/mi) <sup>a</sup>	PM10 (lb/mi) <sup>a</sup>	PM2.5 (lb/mi) <sup>b</sup>	CO2 (lb/mi) <sup>a</sup>	CH4 (lb/mi) <sup>a</sup>	N2O (lb/mi) <sup>a</sup>
<b>Onsite</b>										
None	MDV Diesel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	MDV Diesel	6.64E-05	3.66E-04	1.12E-03	8.27E-06	1.50E-04	4.71E-05	7.49E-01	3.08E-06	2.85E-05
Bucket Truck	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Flat Bed Truck w/Derrick	HHDT	4.23E-04	2.85E-03	1.66E-02	3.50E-05	5.43E-04	3.01E-04	3.54E+00	1.97E-05	1.21E-04
Worker Commute	Commuter	1.75E-04	5.02E-03	5.48E-04	8.45E-06	1.03E-04	4.02E-06	6.97E-01	4.26E-05	2.28E-05

<sup>a</sup> From Table 112 or Table 113

**Motor Vehicle Daily Exhaust Emissions**

**Table 108**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Electrical Construction**

Vehicle	VOC (lb/day) <sup>a</sup>	CO (lb/day) <sup>a</sup>	NOX (lb/day) <sup>a</sup>	SOX (lb/day) <sup>a</sup>	PM10 (lb/day) <sup>a</sup>	PM2.5 (lb/day) <sup>a</sup>	CO2 (lb/day) <sup>a</sup>	CH4 (lb/day) <sup>a</sup>	N2O (lb/day) <sup>a</sup>	CO2e (lb/day) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	1.12	0.00	0.00	1.14
Bucket Truck	0.00	0.00	0.02	0.00	0.00	0.00	5.31	0.00	0.00	5.37
Flat Bed Truck w/Derrick	0.00	0.00	0.02	0.00	0.00	0.00	5.31	0.00	0.00	5.37
Worker Commute	0.05	1.46	0.16	0.00	0.03	0.00	202.15	0.01	0.01	204.45
<b>Offsite Total</b>	<b>0.05</b>	<b>1.47</b>	<b>0.21</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>213.89</b>	<b>0.01</b>	<b>0.01</b>	<b>216.32</b>
<b>Total</b>	<b>0.05</b>	<b>1.47</b>	<b>0.21</b>	<b>0.00</b>	<b>0.03</b>	<b>0.00</b>	<b>213.89</b>	<b>0.01</b>	<b>0.01</b>	<b>216.32</b>

<sup>a</sup> Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Total Exhaust Emissions**

Vehicle	VOC (tons) <sup>a</sup>	CO (tons) <sup>a</sup>	NOX (tons) <sup>a</sup>	SOX (tons) <sup>a</sup>	PM10 (tons) <sup>a</sup>	PM2.5 (tons) <sup>a</sup>	CO2 (tons) <sup>a</sup>	CH4 (tons) <sup>a</sup>	N2O (tons) <sup>a</sup>	CO2e (tons) <sup>b</sup>
<b>Onsite</b>										
None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Onsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bucket Truck	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Flat Bed Truck w/Derrick	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
Worker Commute	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.41
<b>Offsite Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.43</b>	<b>0.00</b>	<b>0.00</b>	<b>0.43</b>
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.43</b>	<b>0.00</b>	<b>0.00</b>	<b>0.43</b>

<sup>a</sup> Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

<sup>b</sup> CO2-equivalent (CO2e) emission factors are CO2 emissions plus 21 x CH4 emissions plus 310 x N2O emissions

**Motor Vehicle Fugitive Particulate Matter Emissions**

Vehicle	Number	Road Type	Miles/ Day/ Vehicle	Days Used	PM10 Emission Factor (lb/mi) <sup>a</sup>	PM2.5 Emission Factor (lb/mi) <sup>a</sup>	PM10 Emissions (lb/day) <sup>b</sup>	PM2.5 Emissions (lb/day) <sup>b</sup>	PM10 Emissions (tons) <sup>c</sup>	PM2.5 Emissions (tons) <sup>c</sup>
<b>Onsite</b>										
None	0	Paved	0	0	0.000	0.000	0.00	0.00	0.00	0.00
<b>Onsite Total</b>							<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Offsite</b>										
1-Ton Crew Cab, 4x4	1	Unpaved	1.5	4	1.311	0.131	1.97	0.20	0.00	0.00
Bucket Truck	1	Unpaved	1.5	4	2.273	0.227	3.41	0.34	0.01	0.00

**Table 108**  
**Distribution for Station Light & Power Construction Emissions**  
**Underground Electrical Construction**

Flat Bed Truck w/Derrick	1	Unpaved	1.5	4	2.273	0.227	3.41	0.34	0.01	0.00
Worker Commute	5	Unpaved	1.5	4	1.102	0.110	8.26	0.83	0.02	0.00
Worker Commute	5	Paved	58	4	0.003	0.001	0.97	0.24	0.00	0.00
<b>Offsite Total</b>							<b>18.01</b>	<b>1.94</b>	<b>0.04</b>	<b>0.00</b>
<b>Total</b>							<b>18.01</b>	<b>1.94</b>	<b>0.04</b>	<b>0.00</b>

a From Table 111

b Emissions [lb/day] = number x miles/day x emission factor [lb/mi]

c Emissions [tons] = Daily emissions [lb/day] x days used / 2,000 [lb/ton]

**Earthwork Fugitive Particulate Matter Emissions**

Activity	Activity Units	Daily Activity Level	Total Activity Level	PM10 Emission Factor (lb/activity) <sup>a</sup>	PM2.5 Emission Factor (lb/activity) <sup>a</sup>	PM10 (lb/day) <sup>b</sup>	PM2.5 (lb/day) <sup>b</sup>	PM10 (tons) <sup>c</sup>	PM2.5 (tons) <sup>c</sup>
Soil Handling	CY			6.65E-02	1.01E-02	0.00	0.00	0.00	0.00
Bulldozing, Scraping and Grading	hr			114.985	38.089	0.00	0.00	0.00	0.00
Storage Pile Wind Erosion	acres			17.6	7.04	0.00	0.00	0.00	0.00
<b>Total</b>						<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

a From Table 114

b Emissions [lb/day] = Emission factor [lb/activity unit] x Daily Activity level [units/day]

c Emissions [tons] = Emission factor [lb/activity unit] x Total Activity level [units] / 2,000 [lb/ton]



**Table 109**

**Motor Vehicle Travel Distances**

**Estimate of Unpaved Travel Distance for Transmission Line Segments**

73.4	Total Mileage of Transmission Line
4	Number of Major Segments
18	Average Length of Major Segments
9	One-Way Distance to Middle of Segment

**Estimate of One-Way Paved Travel from Staging Yard to Transmission Line Unpaved Travel Segment**

5	Estimate of One-Way Paved Travel from Staging Yard to Transmission Line Unpaved Travel Segment
---	--

**Estimate of Paved Travel Distance for workers**

29.5	Distance from Hesperia to North Side Road and Rt. 247
28	Distance from Barstow to North Side Road and Rt. 247
29	Average Distance for worker travel (one way)

**Estimate of On-Site Travel Distance for Substation Construction**

4	10 lengthwise passes (approx 2000 ft each)
---	--

**Table 110**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016

Air Basin      MD

Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
Aerial Lifts	15	0.0101	0.0528	0.0630	0.0001	0.0025	0.0023	8.6	0.0009	0.0002	0.39
	25	0.0150	0.0479	0.0887	0.0001	0.0043	0.0040	11.0	0.0014	0.0003	0.50
	50	0.0433	0.1594	0.1635	0.0003	0.0117	0.0107	19.6	0.0039	0.0005	0.90
	120	0.0416	0.2355	0.3027	0.0004	0.0220	0.0202	38.0	0.0037	0.0010	1.74
	500	0.0949	0.4096	1.1069	0.0021	0.0329	0.0303	212.7	0.0086	0.0055	9.62
	750	0.1769	0.7405	2.0785	0.0039	0.0608	0.0559	384.4	0.0160	0.0100	17.39
Air Compressors	15	0.0104	0.0461	0.0643	0.0001	0.0037	0.0034	7.2	0.0009	0.0002	0.33
	25	0.0219	0.0665	0.1225	0.0002	0.0066	0.0060	14.4	0.0020	0.0004	0.66
	50	0.0674	0.2287	0.1980	0.0003	0.0166	0.0153	22.3	0.0061	0.0006	1.03
	120	0.0630	0.3150	0.4008	0.0006	0.0336	0.0309	46.9	0.0057	0.0012	2.15
	175	0.0829	0.5003	0.6409	0.0010	0.0347	0.0320	88.4	0.0075	0.0023	4.03
	250	0.0839	0.2740	0.8339	0.0015	0.0256	0.0236	131.1	0.0076	0.0034	5.94
	500	0.1387	0.4733	1.2758	0.0023	0.0421	0.0387	231.5	0.0125	0.0060	10.48
	750	0.2164	0.7314	2.0513	0.0036	0.0667	0.0613	357.8	0.0195	0.0093	16.20
Bore/Drill Rigs	15	0.0120	0.0631	0.0753	0.0002	0.0029	0.0027	10.3	0.0011	0.0003	0.47
	25	0.0193	0.0658	0.1218	0.0002	0.0046	0.0042	16.0	0.0017	0.0004	0.73
	50	0.0220	0.2221	0.2104	0.0004	0.0058	0.0053	31.0	0.0020	0.0008	1.42
	120	0.0349	0.4666	0.3305	0.0009	0.0125	0.0115	77.1	0.0031	0.0020	3.51
	175	0.0565	0.7533	0.4371	0.0016	0.0156	0.0143	140.9	0.0051	0.0037	6.41
	250	0.0627	0.3422	0.3883	0.0021	0.0113	0.0104	187.9	0.0057	0.0049	8.50
	500	0.1032	0.5506	0.6246	0.0031	0.0186	0.0171	311.0	0.0093	0.0081	14.06
	750	0.2042	1.0879	1.2417	0.0062	0.0369	0.0339	614.5	0.0184	0.0159	27.78
	1000	0.3269	1.6468	4.6436	0.0093	0.1010	0.0929	927.4	0.0295	0.0240	41.94
	Cement and Mortar Mixers	15	0.0074	0.0386	0.0461	0.0001	0.0019	0.0017	6.3	0.0007	0.0002
25		0.0243	0.0771	0.1431	0.0002	0.0070	0.0065	17.5	0.0022	0.0005	0.80
Concrete/Industrial Saws	25	0.0199	0.0678	0.1255	0.0002	0.0047	0.0043	16.5	0.0018	0.0004	0.75
	50	0.0702	0.2670	0.2559	0.0004	0.0186	0.0171	30.2	0.0063	0.0008	1.39
	120	0.0807	0.4720	0.5776	0.0009	0.0435	0.0400	74.1	0.0073	0.0019	3.38
	175	0.1224	0.8659	1.0439	0.0018	0.0524	0.0482	160.1	0.0110	0.0042	7.29
Cranes	50	0.0777	0.2653	0.2157	0.0003	0.0184	0.0170	23.2	0.0070	0.0006	1.08
	120	0.0743	0.3530	0.4471	0.0006	0.0377	0.0347	50.1	0.0067	0.0013	2.29
	175	0.0861	0.4779	0.6091	0.0009	0.0345	0.0318	80.3	0.0078	0.0021	3.66
	250	0.0875	0.2631	0.7524	0.0013	0.0259	0.0238	112.1	0.0079	0.0029	5.08
	500	0.1324	0.4428	1.0711	0.0018	0.0387	0.0356	179.9	0.0119	0.0047	8.16
	750	0.2240	0.7451	1.8538	0.0030	0.0661	0.0608	302.8	0.0202	0.0079	13.73
	9999	0.8238	2.7044	8.7440	0.0098	0.2551	0.2347	969.7	0.0743	0.0252	44.01
Crawler Tractors	50	0.0943	0.3011	0.2384	0.0003	0.0214	0.0197	24.9	0.0085	0.0007	1.16
	120	0.1072	0.4734	0.6371	0.0008	0.0532	0.0489	65.8	0.0097	0.0017	3.01

**Table 110**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016

Air Basin MD

Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
	175	0.1425	0.7354	1.0083	0.0014	0.0566	0.0521	121.1	0.0129	0.0032	5.53
	250	0.1494	0.4449	1.2413	0.0019	0.0468	0.0430	166.0	0.0135	0.0043	7.53
	500	0.2181	0.7898	1.7418	0.0025	0.0668	0.0615	259.0	0.0197	0.0067	11.76
	750	0.3925	1.4158	3.1882	0.0047	0.1211	0.1114	464.3	0.0354	0.0121	21.08
	1000	0.5965	2.2357	6.3162	0.0066	0.1927	0.1773	657.5	0.0538	0.0171	29.87
Crushing/Proc. Equipment	50	0.1232	0.4488	0.3873	0.0006	0.0309	0.0284	44.0	0.0111	0.0012	2.03
	120	0.1052	0.5588	0.6766	0.0010	0.0554	0.0510	83.1	0.0095	0.0022	3.80
	175	0.1510	0.9530	1.1412	0.0019	0.0619	0.0570	167.1	0.0136	0.0044	7.62
	250	0.1551	0.5067	1.4525	0.0027	0.0453	0.0417	244.3	0.0140	0.0063	11.07
	500	0.2238	0.7534	1.9232	0.0037	0.0647	0.0595	373.3	0.0202	0.0097	16.90
	750	0.3515	1.1810	3.1224	0.0059	0.1027	0.0945	588.3	0.0317	0.0153	26.64
	9999	0.9136	2.9321	10.8003	0.0131	0.2933	0.2699	1306.6	0.0824	0.0339	59.21
Dumpers/Tenders	25	0.0093	0.0314	0.0587	0.0001	0.0024	0.0022	7.6	0.0008	0.0002	0.35
Excavators	25	0.0198	0.0676	0.1252	0.0002	0.0047	0.0043	16.4	0.0018	0.0004	0.75
	50	0.0580	0.2619	0.2164	0.0003	0.0147	0.0135	25.0	0.0052	0.0007	1.15
	120	0.0832	0.5065	0.5286	0.0009	0.0394	0.0363	73.6	0.0075	0.0019	3.36
	175	0.0971	0.6642	0.6554	0.0013	0.0354	0.0326	112.1	0.0088	0.0029	5.11
	250	0.1053	0.3386	0.7851	0.0018	0.0262	0.0241	158.5	0.0095	0.0041	7.18
	500	0.1494	0.4846	1.0223	0.0023	0.0366	0.0336	233.5	0.0135	0.0061	10.58
	750	0.2488	0.8033	1.7451	0.0039	0.0616	0.0567	387.1	0.0225	0.0100	17.53
Forklifts	50	0.0284	0.1484	0.1270	0.0002	0.0079	0.0073	14.7	0.0026	0.0004	0.68
	120	0.0312	0.2129	0.2110	0.0004	0.0148	0.0137	31.2	0.0028	0.0008	1.43
	175	0.0452	0.3313	0.3042	0.0006	0.0165	0.0152	56.0	0.0041	0.0015	2.55
	250	0.0489	0.1569	0.3511	0.0009	0.0116	0.0107	77.1	0.0044	0.0020	3.49
	500	0.0687	0.2146	0.4506	0.0011	0.0163	0.0150	110.9	0.0062	0.0029	5.02
Generator Sets	15	0.0130	0.0651	0.0900	0.0002	0.0048	0.0044	10.2	0.0012	0.0003	0.47
	25	0.0241	0.0811	0.1495	0.0002	0.0077	0.0070	17.6	0.0022	0.0005	0.80
	50	0.0637	0.2398	0.2530	0.0004	0.0175	0.0161	30.6	0.0057	0.0008	1.41
	120	0.0822	0.4767	0.6120	0.0009	0.0434	0.0399	77.9	0.0074	0.0020	3.56
	175	0.1013	0.7331	0.9458	0.0016	0.0434	0.0399	141.9	0.0091	0.0037	6.46
	250	0.1006	0.4058	1.2378	0.0024	0.0342	0.0314	212.3	0.0091	0.0055	9.61
	500	0.1438	0.6410	1.7347	0.0033	0.0507	0.0467	336.6	0.0130	0.0087	15.23
	750	0.2402	1.0347	2.9072	0.0055	0.0837	0.0770	543.3	0.0217	0.0141	24.58
	9999	0.6073	2.2406	8.4553	0.0105	0.2116	0.1947	1047.7	0.0548	0.0272	47.44
Graders	50	0.0815	0.2999	0.2473	0.0004	0.0196	0.0180	27.5	0.0074	0.0007	1.28
	120	0.1001	0.5191	0.6212	0.0009	0.0498	0.0459	74.9	0.0090	0.0020	3.43
	175	0.1213	0.7303	0.8612	0.0014	0.0475	0.0437	123.8	0.0109	0.0032	5.65
	250	0.1249	0.3933	1.0428	0.0019	0.0358	0.0329	172.0	0.0113	0.0045	7.79
	500	0.1577	0.5520	1.2378	0.0023	0.0445	0.0410	229.3	0.0142	0.0060	10.39

**Table 110**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016

Air Basin MD

Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
Off-Highway Tractors	750	0.3354	1.1685	2.6888	0.0049	0.0956	0.0880	485.3	0.0303	0.0126	22.00
	120	0.1804	0.6982	1.0539	0.0011	0.0891	0.0820	93.7	0.0163	0.0025	4.30
	175	0.1780	0.8159	1.2809	0.0015	0.0722	0.0664	130.3	0.0161	0.0034	5.96
	250	0.1414	0.4152	1.1789	0.0015	0.0482	0.0443	130.3	0.0128	0.0034	5.92
	750	0.5700	2.3652	4.7352	0.0057	0.1902	0.1750	567.6	0.0514	0.0148	25.83
	1000	0.8608	3.7053	8.7994	0.0082	0.2874	0.2644	813.6	0.0777	0.0212	37.05
Off-Highway Trucks	175	0.1162	0.7545	0.7637	0.0014	0.0417	0.0383	125.0	0.0105	0.0033	5.70
	250	0.1178	0.3648	0.8666	0.0019	0.0290	0.0267	166.4	0.0106	0.0043	7.54
	500	0.1854	0.5791	1.2508	0.0027	0.0448	0.0412	272.1	0.0167	0.0071	12.33
	750	0.3021	0.9393	2.0910	0.0044	0.0738	0.0679	441.3	0.0273	0.0115	19.99
	1000	0.4570	1.4115	4.8811	0.0063	0.1357	0.1248	624.2	0.0412	0.0162	28.29
Other Construction Equipment	15	0.0118	0.0617	0.0736	0.0002	0.0029	0.0026	10.1	0.0011	0.0003	0.46
	25	0.0159	0.0544	0.1007	0.0002	0.0038	0.0035	13.2	0.0014	0.0003	0.60
	50	0.0529	0.2444	0.2272	0.0004	0.0143	0.0131	28.0	0.0048	0.0007	1.29
	120	0.0745	0.5165	0.5488	0.0009	0.0383	0.0353	80.8	0.0067	0.0021	3.69
	175	0.0727	0.5856	0.5848	0.0012	0.0290	0.0267	106.4	0.0066	0.0028	4.85
	500	0.1242	0.4864	1.0402	0.0025	0.0350	0.0322	254.0	0.0112	0.0066	11.49
Other General Industrial Equipmen	15	0.0066	0.0390	0.0466	0.0001	0.0018	0.0017	6.4	0.0006	0.0002	0.29
	25	0.0185	0.0631	0.1169	0.0002	0.0044	0.0040	15.3	0.0017	0.0004	0.70
	50	0.0704	0.2449	0.1999	0.0003	0.0171	0.0158	21.7	0.0064	0.0006	1.01
	120	0.0900	0.4340	0.5404	0.0007	0.0463	0.0426	62.0	0.0081	0.0016	2.84
	175	0.0995	0.5662	0.7079	0.0011	0.0398	0.0366	95.8	0.0090	0.0025	4.37
	250	0.0987	0.2944	0.8771	0.0015	0.0278	0.0256	135.5	0.0089	0.0035	6.14
	500	0.1824	0.5588	1.4858	0.0026	0.0507	0.0466	265.2	0.0165	0.0069	12.01
	750	0.3031	0.9210	2.5481	0.0044	0.0855	0.0787	437.1	0.0273	0.0113	19.80
	1000	0.4268	1.3208	4.9252	0.0056	0.1383	0.1272	559.1	0.0385	0.0145	25.35
Other Material Handling Equipment	50	0.0977	0.3384	0.2779	0.0004	0.0238	0.0219	30.3	0.0088	0.0008	1.41
	120	0.0874	0.4225	0.5278	0.0007	0.0452	0.0416	60.6	0.0079	0.0016	2.78
	175	0.1253	0.7172	0.8995	0.0014	0.0504	0.0464	122.0	0.0113	0.0032	5.57
	250	0.1042	0.3135	0.9371	0.0016	0.0296	0.0273	144.9	0.0094	0.0038	6.57
	500	0.1300	0.4021	1.0713	0.0019	0.0365	0.0336	191.5	0.0117	0.0050	8.67
	9999	0.5858	1.7445	6.5141	0.0073	0.1824	0.1678	740.7	0.0529	0.0192	33.58
Pavers	25	0.0230	0.0774	0.1446	0.0002	0.0061	0.0056	18.6	0.0021	0.0005	0.85
	50	0.1116	0.3335	0.2691	0.0004	0.0252	0.0232	28.0	0.0101	0.0007	1.30
	120	0.1162	0.4925	0.7022	0.0008	0.0590	0.0543	69.1	0.0105	0.0018	3.17
	175	0.1522	0.7671	1.1259	0.0014	0.0626	0.0576	128.2	0.0137	0.0034	5.85
	250	0.1757	0.5365	1.5465	0.0022	0.0586	0.0539	194.2	0.0159	0.0051	8.81
	500	0.1954	0.7641	1.6700	0.0023	0.0640	0.0589	233.0	0.0176	0.0061	10.58
Paving Equipment	25	0.0152	0.0519	0.0962	0.0002	0.0036	0.0034	12.6	0.0014	0.0003	0.57

**Table 110**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016

Air Basin MD

Equipment	MaxHP	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	(lb/hr) N2O	(gal/hr) Fuel
	50	0.0951	0.2826	0.2295	0.0003	0.0215	0.0198	23.9	0.0086	0.0006	1.11
	120	0.0911	0.3858	0.5516	0.0006	0.0467	0.0429	54.5	0.0082	0.0014	2.50
	175	0.1187	0.5999	0.8845	0.0011	0.0491	0.0452	100.9	0.0107	0.0026	4.61
	250	0.1076	0.3300	0.9691	0.0014	0.0360	0.0331	122.2	0.0097	0.0032	5.54
Plate Compactors	15	0.0050	0.0263	0.0314	0.0001	0.0012	0.0011	4.3	0.0005	0.0001	0.20
Pressure Washers	15	0.0062	0.0312	0.0431	0.0001	0.0023	0.0021	4.9	0.0006	0.0001	0.22
	25	0.0098	0.0329	0.0606	0.0001	0.0031	0.0029	7.1	0.0009	0.0002	0.33
	50	0.0224	0.0945	0.1138	0.0002	0.0069	0.0063	14.3	0.0020	0.0004	0.65
	120	0.0219	0.1404	0.1803	0.0003	0.0114	0.0105	24.1	0.0020	0.0006	1.10
Pumps	15	0.0106	0.0474	0.0661	0.0001	0.0038	0.0035	7.4	0.0010	0.0002	0.34
	25	0.0296	0.0896	0.1653	0.0002	0.0089	0.0081	19.5	0.0027	0.0005	0.89
	50	0.0773	0.2830	0.2871	0.0004	0.0207	0.0190	34.3	0.0070	0.0009	1.58
	120	0.0859	0.4842	0.6215	0.0009	0.0456	0.0419	77.9	0.0078	0.0020	3.56
	175	0.1051	0.7345	0.9483	0.0016	0.0450	0.0414	140.0	0.0095	0.0037	6.38
	250	0.1008	0.3910	1.1926	0.0023	0.0337	0.0310	201.2	0.0091	0.0052	9.10
	500	0.1567	0.6671	1.8006	0.0034	0.0540	0.0497	344.9	0.0141	0.0089	15.61
	750	0.2666	1.1029	3.0910	0.0057	0.0913	0.0840	570.2	0.0241	0.0148	25.80
	9999	0.8122	2.9422	11.0546	0.0136	0.2800	0.2576	1353.6	0.0733	0.0351	61.31
Rollers	15	0.0074	0.0386	0.0460	0.0001	0.0018	0.0017	6.3	0.0007	0.0002	0.29
	25	0.0161	0.0549	0.1016	0.0002	0.0038	0.0035	13.3	0.0015	0.0003	0.61
	50	0.0797	0.2677	0.2321	0.0003	0.0191	0.0176	26.0	0.0072	0.0007	1.20
	120	0.0794	0.3967	0.5105	0.0007	0.0415	0.0382	58.9	0.0072	0.0015	2.70
	175	0.1031	0.6146	0.7957	0.0012	0.0431	0.0396	108.0	0.0093	0.0028	4.93
	250	0.1041	0.3461	0.9947	0.0017	0.0333	0.0306	153.0	0.0094	0.0040	6.93
	500	0.1390	0.5316	1.2651	0.0021	0.0442	0.0406	218.9	0.0125	0.0057	9.92
Rough Terrain Forklifts	50	0.0838	0.3456	0.2951	0.0004	0.0216	0.0199	33.8	0.0076	0.0009	1.56
	120	0.0728	0.4227	0.4736	0.0007	0.0368	0.0339	62.4	0.0066	0.0016	2.85
	175	0.1079	0.7230	0.7786	0.0014	0.0422	0.0388	124.8	0.0097	0.0033	5.69
	250	0.1106	0.3588	0.9194	0.0019	0.0302	0.0278	170.6	0.0100	0.0044	7.73
	500	0.1588	0.5200	1.2074	0.0025	0.0427	0.0393	256.3	0.0143	0.0067	11.61
Rubber Tired Dozers	175	0.1849	0.8272	1.3057	0.0015	0.0739	0.0680	129.4	0.0167	0.0034	5.92
	250	0.2097	0.6062	1.7064	0.0021	0.0706	0.0650	183.3	0.0189	0.0048	8.34
	500	0.2792	1.1673	2.2363	0.0026	0.0915	0.0841	264.6	0.0252	0.0069	12.05
	750	0.4216	1.7575	3.4223	0.0040	0.1388	0.1277	398.4	0.0380	0.0104	18.14
	1000	0.6577	2.8383	6.5313	0.0059	0.2168	0.1995	591.4	0.0593	0.0154	26.95
Rubber Tired Loaders	25	0.0204	0.0696	0.1289	0.0002	0.0048	0.0044	16.9	0.0018	0.0004	0.77
	50	0.0900	0.3346	0.2780	0.0004	0.0218	0.0200	31.1	0.0081	0.0008	1.44
	120	0.0771	0.4059	0.4822	0.0007	0.0386	0.0355	58.9	0.0070	0.0015	2.69
	175	0.1021	0.6236	0.7285	0.0012	0.0402	0.0369	106.2	0.0092	0.0028	4.85

**Table 110**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016

Air Basin MD

Equipment	MaxHP	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(gal/hr)
		ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O	Fuel
	250	0.1055	0.3354	0.8884	0.0017	0.0302	0.0278	148.8	0.0095	0.0039	6.75
	500	0.1591	0.5590	1.2560	0.0023	0.0449	0.0413	236.8	0.0144	0.0062	10.73
	750	0.3276	1.1451	2.6434	0.0049	0.0933	0.0859	485.1	0.0296	0.0126	21.98
	1000	0.4390	1.5579	4.9818	0.0060	0.1421	0.1307	593.3	0.0396	0.0154	26.91
Scrapers	120	0.1563	0.6768	0.9284	0.0011	0.0780	0.0718	93.8	0.0141	0.0025	4.30
	175	0.1768	0.8992	1.2602	0.0017	0.0708	0.0652	147.9	0.0160	0.0039	6.76
	250	0.1909	0.5685	1.6065	0.0024	0.0606	0.0558	209.3	0.0172	0.0054	9.50
	500	0.2734	1.0101	2.2158	0.0032	0.0850	0.0782	321.1	0.0247	0.0084	14.58
	750	0.4742	1.7450	3.9092	0.0056	0.1485	0.1366	554.8	0.0428	0.0144	25.19
Signal Boards	15	0.0072	0.0376	0.0449	0.0001	0.0018	0.0016	6.2	0.0006	0.0002	0.28
	50	0.0831	0.3131	0.3029	0.0005	0.0219	0.0201	36.2	0.0075	0.0010	1.67
	120	0.0871	0.5067	0.6223	0.0009	0.0466	0.0428	80.1	0.0079	0.0021	3.66
	175	0.1167	0.8280	1.0071	0.0017	0.0497	0.0457	154.4	0.0105	0.0040	7.03
	250	0.1317	0.4994	1.4456	0.0029	0.0424	0.0390	255.1	0.0119	0.0066	11.54
Skid Steer Loaders	25	0.0183	0.0593	0.1106	0.0002	0.0053	0.0049	13.8	0.0017	0.0004	0.63
	50	0.0323	0.2087	0.1951	0.0003	0.0094	0.0087	25.5	0.0029	0.0007	1.17
	120	0.0295	0.2693	0.2409	0.0005	0.0138	0.0127	42.7	0.0027	0.0011	1.95
	50	0.0375	0.1299	0.1218	0.0002	0.0093	0.0085	14.1	0.0034	0.0004	0.65
Surfacing Equipment	120	0.0778	0.4119	0.5357	0.0007	0.0402	0.0370	63.7	0.0070	0.0017	2.91
	175	0.0733	0.4690	0.6121	0.0010	0.0307	0.0283	85.7	0.0066	0.0022	3.91
	250	0.0832	0.3010	0.8495	0.0015	0.0280	0.0257	134.7	0.0075	0.0035	6.10
	500	0.1259	0.5481	1.2540	0.0022	0.0425	0.0391	221.0	0.0114	0.0057	10.01
	750	0.2001	0.8599	2.0162	0.0035	0.0675	0.0621	346.7	0.0181	0.0090	15.71
Sweepers/Scrubbers	15	0.0124	0.0728	0.0869	0.0002	0.0034	0.0031	11.9	0.0011	0.0003	0.54
	25	0.0236	0.0807	0.1494	0.0002	0.0056	0.0051	19.6	0.0021	0.0005	0.89
	50	0.0664	0.3077	0.2709	0.0004	0.0182	0.0167	31.5	0.0060	0.0008	1.45
	120	0.0774	0.5009	0.5315	0.0009	0.0391	0.0360	75.0	0.0070	0.0020	3.43
	175	0.1096	0.7990	0.7988	0.0016	0.0427	0.0393	138.9	0.0099	0.0036	6.33
	250	0.0972	0.3248	0.7925	0.0018	0.0255	0.0235	161.9	0.0088	0.0042	7.33
Tractors/Loaders/Backhoes	25	0.0192	0.0653	0.1215	0.0002	0.0048	0.0044	15.8	0.0017	0.0004	0.72
	50	0.0622	0.2946	0.2534	0.0004	0.0162	0.0149	30.3	0.0056	0.0008	1.40
	120	0.0524	0.3456	0.3522	0.0006	0.0253	0.0233	51.7	0.0047	0.0014	2.36
	175	0.0787	0.5844	0.5566	0.0011	0.0292	0.0269	101.3	0.0071	0.0026	4.62
	250	0.1024	0.3530	0.7902	0.0019	0.0260	0.0239	171.6	0.0092	0.0045	7.77
	500	0.1983	0.6958	1.4074	0.0039	0.0496	0.0456	344.5	0.0179	0.0089	15.60
	750	0.2988	1.0436	2.1713	0.0058	0.0755	0.0695	516.8	0.0270	0.0134	23.40
Trenchers	15	0.0098	0.0516	0.0616	0.0001	0.0024	0.0022	8.5	0.0009	0.0002	0.39
	25	0.0397	0.1354	0.2507	0.0004	0.0094	0.0086	32.9	0.0036	0.0009	1.50
	50	0.1303	0.3809	0.3138	0.0004	0.0293	0.0269	32.9	0.0118	0.0009	1.53

**Table 110**  
**MDAQMD, San Bernardino County Fleet Average Emission Factors (Diesel)<sup>a</sup>**

2016

Air Basin MD

Equipment	MaxHP	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(gal/hr)
		ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O	Fuel
	120	0.1078	0.4558	0.6645	0.0008	0.0550	0.0506	64.8	0.0097	0.0017	2.97
	175	0.1676	0.8488	1.2792	0.0016	0.0699	0.0643	143.8	0.0151	0.0038	6.56
	250	0.1989	0.6255	1.8028	0.0025	0.0690	0.0635	222.7	0.0179	0.0058	10.11
	500	0.2558	1.0674	2.2733	0.0031	0.0873	0.0803	311.0	0.0231	0.0081	14.13
	750	0.4845	2.0123	4.3689	0.0059	0.1663	0.1530	586.4	0.0437	0.0153	26.63
Welders	15	0.0089	0.0396	0.0552	0.0001	0.0032	0.0030	6.2	0.0008	0.0002	0.28
	25	0.0171	0.0519	0.0957	0.0001	0.0051	0.0047	11.3	0.0015	0.0003	0.51
	50	0.0725	0.2489	0.2260	0.0003	0.0182	0.0167	25.9	0.0065	0.0007	1.20
	120	0.0498	0.2581	0.3303	0.0005	0.0267	0.0245	39.5	0.0045	0.0010	1.80
	175	0.0857	0.5408	0.6972	0.0011	0.0364	0.0335	98.1	0.0077	0.0026	4.47
	250	0.0701	0.2427	0.7413	0.0013	0.0222	0.0205	119.0	0.0063	0.0031	5.39
	500	0.0912	0.3360	0.9083	0.0016	0.0291	0.0268	167.4	0.0082	0.0043	7.58

<sup>a</sup> ROG, CO, NOx, SOx, PM, CO2 and CH4 emission factors calculated by dividing total daily emissions in MDAB by total hours of operation in MDAB by equipment type and horsepower range calculated with CARB OFFROAD 2007 model.

Hourly fuel use calculated by dividing total daily fuel use in MDAB by total hours of operation in MDAB by equipment type and horsepower range.

Diesel PM10 emission factor = PM emission factor

Diesel PM2.5 emission factor [lb/hr] = PM10 emission factor [lb/hr] x PM2.5 fraction of PM10

PM2.5 Fraction= 0.920

From Appendix A, Final-Methodology to Calculate Particulate Matter (PM) 2.5

and PM 2.5 Significance Thresholds, SCAQMD, October 2006,

[http://www.aqmd.gov/ceqa/handbook/PM2\\_5/PM2\\_5.html](http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html)

N2O emission factors calculated by multiplying hourly fuel use by 0.26 g/gallon from Table 13.7 from 2013 Climate Registry Default Emission Factors downloaded from

<http://www.theclimaterestry.org/downloads/2013/01/2013-Climat-Registry-Default-Emissions-Factors.pdf>

Table 111

## Motor Vehicle Entrained Road Dust Emission Factors

Vehicle Type	Surface	Silt Loading (sL, g/m <sup>2</sup> ) or Silt Content (s, %) <sup>a</sup>	Average Weight (W) (tons) <sup>b</sup>	Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup>	Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup>	Control Efficiency (%) <sup>d</sup>	Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup>	Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup>
1-Ton Crew Cab Flatbed, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab Flatbed, 4x4	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
1-Ton Crew Cab, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4, Apple Valley-Desert View	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
1-Ton Crew Cab, 4x4, Gale-Pisgah	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4, Gale-Pisgah	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
1-Ton Crew Cab, 4x4, Substation	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4, Substation	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
1-Ton Crew Cab, 4x4, Transmission	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Crew Cab, 4x4, Transmission	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
1-Ton Truck, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
1-Ton Truck, 4x4	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
2 Ton Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
2 Ton Truck	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
3/4-Ton Pick-up Truck, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
3/4-Ton Pick-up Truck, 4x4	Unpaved	8	3.4	1.10E+00	1.10E-01	0%	1.10E+00	1.10E-01
3/4-Ton Truck, 4x4	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
3/4-Ton Truck, 4x4	Unpaved	8	3.4	1.10E+00	1.10E-01	0%	1.10E+00	1.10E-01
40-Foot Flat Bed Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
40-Foot Flat Bed Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Aggregate Base Delivery Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Aggregate Base Delivery Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Asphalt Delivery Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Asphalt Delivery Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Auger Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Auger Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Boom Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04



Table 111

Motor Vehicle Entrained Road Dust Emission Factors

Vehicle Type	Surface	Silt Loading (sL, g/m <sup>2</sup> ) or Silt Content (s, %) <sup>a</sup>	Average Weight (W) (tons) <sup>b</sup>	Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup>	Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup>	Control Efficiency (%) <sup>d</sup>	Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup>	Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup>
Boom Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Boom/Crane Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Boom/Crane Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Bucket Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Bucket Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Carry-all Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Carry-all Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Concrete Mixer Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Concrete Mixer Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Concrete Redi-Mix Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Concrete Redi-Mix Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Concrete Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Concrete Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Crew Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Crew Truck	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
Dump Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Dump Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Extendable Flat Bed Pole Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Extendable Flat Bed Pole Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Flat Bed Pole Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Flat Bed Pole Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Flat Bed Truck w/Derrick	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Flat Bed Truck w/Derrick	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Flat Bed Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Flat Bed Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Flatbed Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Flatbed Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Foreman Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Foreman Truck	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01

Table 111

## Motor Vehicle Entrained Road Dust Emission Factors

Vehicle Type	Surface	Silt Loading (sL, g/m <sup>2</sup> ) or Silt Content (s, %) <sup>a</sup>	Average Weight (W) (tons) <sup>b</sup>	Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup>	Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup>	Control Efficiency (%) <sup>d</sup>	Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup>	Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup>
Fuel, Helicopter Support Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Fuel, Helicopter Support Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Gravel Delivery Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Gravel Delivery Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Inspection Services	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Inspection Services	Unpaved	8	3.4	1.10E+00	1.10E-01	0%	1.10E+00	1.10E-01
Jet A Fuel Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Jet A Fuel Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Lowboy Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Lowboy Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Manlift/Bucket Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Manlift/Bucket Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Pick-up Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Pick-up Truck	Unpaved	8	10	1.79E+00	1.79E-01	0%	1.79E+00	1.79E-01
Pipe Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Pipe Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Sleeving Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Sleeving Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Soils Test Crew Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Soils Test Crew Truck	Unpaved	8	6.5	1.47E+00	1.47E-01	0%	1.47E+00	1.47E-01
Splicing Lab	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Splicing Lab	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
Splicing Rig	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Splicing Rig	Unpaved	8	5	1.31E+00	1.31E-01	0%	1.31E+00	1.31E-01
Stake Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Stake Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Static Truck/Tensioner	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Static Truck/Tensioner	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Structure Delivery Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04

Table 111

Motor Vehicle Entrained Road Dust Emission Factors

Vehicle Type	Surface	Silt Loading (sL, g/m2) or Silt Content (s, %) <sup>a</sup>	Average Weight (W) (tons) <sup>b</sup>	Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup>	Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup>	Control Efficiency (%) <sup>d</sup>	Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup>	Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup>
Structure Delivery Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Survey Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Survey Truck	Unpaved	8	3.4	1.10E+00	1.10E-01	0%	1.10E+00	1.10E-01
Tool Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Tool Truck	Unpaved	8	3.4	1.10E+00	1.10E-01	0%	1.10E+00	1.10E-01
Truck, Semi Tractor	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Truck, Semi Tractor	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Water Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Water Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Wire Truck/Trailer	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Wire Truck/Trailer	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Wiring Truck	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Wiring Truck	Unpaved	8	17	2.27E+00	2.27E-01	0%	2.27E+00	2.27E-01
Worker Commute	Paved	0.4	3.4	3.33E-03	8.17E-04	0%	3.33E-03	8.17E-04
Worker Commute	Unpaved	8	3.4	1.10E+00	1.10E-01	0%	1.10E+00	1.10E-01

<sup>a</sup> Paved road silt loading from MDAQMD Mineral Guidance for paved low traffic road.

Unpaved road silt content from MDAQMD Mineral Guidance for unpaved industrial haul road.

<sup>b</sup> Average paved on-road vehicle weight in San Bernardino County from ARB Emission Inventory Methodology 7.9, Entrained Paved Road Dust (1997)

Unpaved worker commuting weight on access road assumed to be same as paved road weight

Unpaved weight for other trucks is based on upper limit of 33,000 lbs for medium heavy-duty trucks. Heavy heavy duty trucks are also in this range, as they range from 30,001 lbs to 60,000.

<sup>c</sup> Equations:

$$EF(\text{paved}) = k_p (sL)^{0.91} (W)^{1.02}$$

$$EF(\text{unpaved}) = k_u (s/12)^a (W/3)^b$$

Ref: AP-42, Section 13.2.1, "Paved Roads," January 2011

Ref: AP-42, Section 13.2.2, "Unpaved Roads," November 2006

Constants:

$k_p =$  0.0022 (Particle size multiplier for PM10)  
 $k_u =$  0.00054 (Particle size multiplier for PM2.5)  
 $k_u =$  1.5 (Particle size multiplier for PM)

**Table 111**

**Motor Vehicle Entrained Road Dust Emission Factors**

<b>Vehicle Type</b>	<b>Surface</b>	<b>Silt Loading (sL, g/m2) or Silt Content (s, %) <sup>a</sup></b>	<b>Average Weight (W) (tons) <sup>b</sup></b>	<b>Un-controlled PM10 Emission Factor (lb/VMT) <sup>c</sup></b>	<b>Un-controlled PM2.5 Emission Factor (lb/VMT) <sup>c</sup></b>	<b>Control Efficiency (%) <sup>d</sup></b>	<b>Controlled PM10 Emission Factor (lb/VMT) <sup>e</sup></b>	<b>Controlled PM2.5 Emission Factor (lb/VMT) <sup>e</sup></b>
---------------------	----------------	--	---	---	--	--	--	---

	0.15	(Particle size multiplier for PM2.5)
a =	0.9	for PM10
	0.9	for PM2.5
b =	0.45	for PM10
	0.45	for PM2.5

**Table 112  
Commuter Vehicle And Pick-up Truck Emission Factors**

EMFAC 2011  
2016 Estimated Annual Emissions  
EMFAC 2011 Vehicle Categories  
San Bernardino COUNTY  
Mojave Desert AIR BASIN  
Mojave Desert AQMD  
All Model Years

Comm. Vehicles Gas (pounds/mile)		MDV Diesel (pounds/mile)		MDV Gas (pounds/mile)		MDV Combo (pounds/mile)	
CO	0.00502350	CO	0.00036597	CO	0.00784027	CO	0.00410312
NOx	0.00054760	NOx	0.00112028	NOx	0.00114357	NOx	0.00113192
ROG	0.00017532	ROG	0.00006639	ROG	0.00028277	ROG	0.00017458
SOx	0.00000845	SOx	0.00000827	SOx	0.00001317	SOx	0.00001072
PM10	0.00010306	PM10	0.00014987	PM10	0.00010343	PM10	0.00012665
PM2.5	0.00000402	PM2.5	0.00004711	PM2.5	0.00000438	PM2.5	0.00002575
CO2	0.69705741	CO2	0.74885278	CO2	1.15450592	CO2	0.95167935
CH4	0.00004259	CH4	0.00000308	CH4	0.00007002	CH4	0.00003655
N2O	0.00002278	N2O	0.00002848	N2O	0.00004757	N2O	0.00003803

Note: Commuter vehicles are based on emissions from gasoline LDV, LDT1, and LDT2

Methane and N2O calculated as prescribed by ARB:

[http://www.arb.ca.gov/msei/emfac2011-faq.htm#emfac2011\\_web\\_db\\_qstn07](http://www.arb.ca.gov/msei/emfac2011-faq.htm#emfac2011_web_db_qstn07)

• **How do I calculate Methane (CH4) and Nitrous Oxide (N2O) emissions?**

• Methane (CH4) calculation method

- Run EMFAC2011-LDV to calculate CH4 for those vehicle categories;
- Use  $CH_4 = 0.0408 * TOG = 0.058821 * THC$  to calculate CH4 for EMFAC2011-HD categories.

• Nitrous Oxide (N2O) calculation method

- Use 4.16% of NOx to calculate N2O for all gasoline vehicles, the same assumption as for the emissions inventory for the [Advanced Clean Cars rule](#);
- Use 0.3316 g/gallon fuel to calculate for all diesel vehicles as the GHG inventory.

**Table 113**  
**Light Heavy-Duty and Heavy Heavy-Duty Vehicle Emission Factors**

EMFAC 2011  
 2016 Estimated Annual Emissions  
 EMFAC 2011 Vehicle Categories  
 San Bernardino COUNTY  
 Mojave Desert AIR BASIN  
 Mojave Desert AQMD  
 All Model Years

LHDT Diesel (pounds/mile)		HHDT Diesel (pounds/mile)	
CO	0.00192798	CO	0.00284760
NOx	0.01237034	NOx	0.01656235
ROG	0.00027862	ROG	0.00042317
SOx	0.00001103	SOx	0.00003500
PM10	0.00026112	PM10	0.00054297
PM2.5	0.00005485	PM2.5	0.00030129
CO2	1.11519022	CO2	3.54025345
CH4	0.00001294	CH4	0.00001966
N2O	0.00003802	N2O	0.00012069

Note: HHDT is based on the emissions from the T7 Tractor.

Methane and N2O calculated as prescribed by ARB:

[http://www.arb.ca.gov/msei/emfac2011-faq.htm#emfac2011\\_web\\_db\\_qstn07](http://www.arb.ca.gov/msei/emfac2011-faq.htm#emfac2011_web_db_qstn07)

• **How do I calculate Methane (CH4) and Nitrous Oxide (N2O) emissions?**

- Methane (CH4) calculation method
  - Run EMFAC2011-LDV to calculate CH4 for those vehicle categories;
  - Use  $CH_4 = 0.0408 * TOG = 0.058821 * THC$  to calculate CH4 for EMFAC2011-HD categories.
- Nitrous Oxide (N2O) calculation method
  - Use 4.16% of NOx to calculate N2O for all gasoline vehicles, the same assumption as for the emissions inventory for the [Advanced Clean Cars rule](#);
  - Use 0.3316 g/gallon fuel to calculate for all diesel vehicles as the GHG inventory.

**Table 114**  
**Fugitive Dust Emission Factors**  
**Soil Dropping During Excavation**

Emission Factor [lb/cu. yd] =  $0.0032 \times (\text{mean wind speed [mi/hr]} / 5)^{1.3} / (\text{moisture [\%]} / 2)^{1.4} \times (\text{number drops per ton}) \times (\text{density [ton/cu. yd]}) \times k$   
 Reference: AP-42, Equation (1), Section 13.2.4, November 2006

Parameter	Value	Basis
Mean Wind Speed	7.7	Conservative default from Wind Erosion from Unpaved Areas and Roads, MDAQMD Mineral Guidance.
Moisture	0.5	Conservative default from Bulldozing, Scraping and Grading, MDAQMD Mineral Guidance.
Number Drops	4	Assumption
Soil Density	1.215	Table 2.46, Handbook of Solid Waste Management

PM10 Emission Factor 6.65E-02 lb/cu. yd (k = 0.35)  
 PM2.5 Emission Factor 1.01E-02 lb/cu. yd (k = 0.053)

Emissions [pounds per day] = Controlled emission factor [pounds per cubic yard] x Volume soil handled [cubic yards per day]

**Storage Pile Wind Erosion**

Emission Factor [lb/day-acre] =  $k \times 1.7 \times (\text{silt content [\%]} / 1.5) \times (365 / 235) \times (\text{percentage of time unobstructed wind exceeds 12 mph} / 15)$   
 Reference: MDAQMD Emission Inventory Guidance, Mineral Handling and Processing Industries, April 2000

Parameter	Value	Basis
Silt Content	30	Conservative default from Bulldozing, Scraping and Grading, MDAQMD Mineral Guidance.
Pct. time wind > 12 mph	100	Worst-case assumption

PM10 Emission Factor (Uncontrolled) 176.0 lb/day-acre (k = 0.5)  
 PM2.5 Emission Factor (Uncontrolled) 70.4 lb/day-acre (k = 0.2)  
 Reduction from Watering Twice/Day 90% Control efficiency from watering storage pile by hand at a rate of 1.4 gallons/hour-yard<sup>2</sup>, Table XI-B, Mitigation Measure Examples, Fugitive Dust from Materials Handling, [http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/MM\\_fugitive.html](http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/MM_fugitive.html)  
 Controlled PM10 Emission Factor 17.6 lb/day-acre  
 Controlled PM2.5 Emission Factor 7.0 lb/day-acre

Emissions [pounds per day] = Controlled emission factor [pounds per acre-day] x Storage pile surface area [acres]

**Bulldozing, Scraping and Grading**

PM10 Emission Factor [lb/hr] =  $0.75 \times (\text{silt content [\%]} )^{1.5} / (\text{moisture})^{1.4}$   
 PM2.5 Emission Factor [lb/hr] =  $0.60 \times (\text{silt content [\%]} )^{1.2} / (\text{moisture})^{1.3}$   
 Reference: AP-42, Table 11.9-1, July 1998

Parameter	Value	Basis
Silt Content	15	Default value from MDAQMD Rule 403.2 (F)
Moisture	0.5	Conservative default from Bulldozing, Scraping and Grading, MDAQMD Mineral Guidance.

PM10 Emission Factor 115.0 lb/hr  
PM2.5 Emission Factor 38.1 lb/hr

Emissions [pounds per day] = Controlled emission factor [pounds per hour] x Bulldozing, scraping or grading time [hours/day]