

Annual Estimated Emissions from the Proposed Project within the SDAPCD and SCAPCD

Emission Source	Emissions (tons/year)						Emissions (metric tons/year)			
	VOCs	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO ₂ e
Proposed Project Emissions within the SDAPCD										
Construction Emissions (tons/year)	0.664	7.342	3.984	0.014	0.412	0.289	1,224.574	0.272	0.000	1,230.285
Construction Emissions (lbs/day)	3.641	40.231	21.829	0.075	2.255	1.586	N/A	N/A	N/A	N/A
Helicopter Emissions (lbs/day)	50.743	26.100	121.348	N/A	2.120	19.083	N/A	N/A	N/A	575.700
Total Emissions (lbs/day)	54.384	66.331	143.178	0.075	4.375	20.668	N/A	N/A	N/A	N/A
Significance Thresholds (lbs/day)	75	250	550	250	100	55	N/A	N/A	N/A	N/A
Exceeds Air Quality Significance Threshold Standards?	No	No	No	No	No	No	N/A	N/A	N/A	N/A
Proposed Project Emissions within the SCAQMD										
Construction Emissions (tons/year)	0.035	0.386	0.210	0.001	0.022	0.015	64.451	0.014	0.000	64.752
Construction Emissions (lbs/day)	0.192	2.117	1.149	0.004	0.119	0.083	N/A	N/A	N/A	N/A
Helicopter Emissions (lbs/day)	2.671	1.374	6.387	N/A	0.112	1.004	N/A	N/A	N/A	30.300
Total Emissions (lbs/day)	2.862	3.491	7.536	0.004	0.230	1.088	N/A	N/A	N/A	N/A
Significance Thresholds (lbs/day)	75	100	550	150	100	55	N/A	N/A	N/A	N/A
Exceeds Air Quality Significance Threshold Standards?	No	No	No	No	No	No	N/A	N/A	N/A	N/A

- Notes:
1. Since the project is located within two air districts (SDAPCD and SCAQMD), the projected emissions were separated by air district. It was estimated that 95% of the construction effort would occur within SDAPCD, and 5% would occur within SCAQMD. The emissions were modeled as if all construction would occur within the SDAPCD, and then the emissions were apportioned appropriately between the two air districts for evaluation of impact significance.
 2. Per SDG&E's administrative safety controls, only one type of helicopter would be used for construction at a time during any given day. However, it is reasonable that both types of helicopters might be used on-site. The light duty helicopter might ferry crews to remote locations, followed by the heavy duty helicopter installing/removing poles. Therefore, to provide maximum flexibility in the construction approach, a conservative peak helicopter emissions calculation was assumed that summed the peak daily usage for each helicopter.
 3. The CO₂e for helicopter emissions was calculated via the USEPA's Greenhouse Gas Equivalencies Calculator, located at: <http://www2.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

N/A = not available or not applicable

Summer Peak Estimated Emissions from the Proposed Project within the SDAPCD and SCAPCD

Emission Source	Emissions (lbs/day)						Emissions (metric tons/year)			
	VOCs	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO _{2e}
Proposed Project Emissions within the SDAPCD										
Construction Emissions	12.782	141.206	74.588	0.260	7.986	5.520	4,258.099	0.967	0.000	4,278.400
Helicopter Emissions	50.743	26.100	121.348	N/A	2.120	19.083	N/A	N/A	N/A	575.700
Total Emissions (lbs/day)	63.525	167.306	195.936	0.260	10.106	24.603	N/A	N/A	N/A	N/A
Significance Thresholds (lbs/day)	75	250	550	250	100	55	N/A	N/A	N/A	N/A
Exceeds Air Quality Significance Threshold Standards?	No	No	No	No	No	No	N/A	N/A	N/A	N/A
Proposed Project Emissions within the SCAQMD										
Construction Emissions (lbs/day)	0.673	7.432	3.926	0.014	0.420	0.291	224.110	0.051	0.000	225.179
Helicopter Emissions	2.671	1.374	6.387	N/A	0.112	1.004	N/A	N/A	N/A	30.300
Total Emissions (lbs/day)	3.343	8.806	10.312	0.014	0.532	1.295	N/A	N/A	N/A	N/A
Significance Thresholds (lbs/day)	75	100	550	150	100	55	N/A	N/A	N/A	N/A
Exceeds Air Quality Significance Threshold Standards?	No	No	No	No	No	No	N/A	N/A	N/A	N/A

- Notes:
1. Since the project is located within two air districts (SDAPCD and SCAQMD), the projected emissions were separated by air district. It was estimated that 95% of the construction effort would occur within SDAPCD, and 5% would occur within SCAQMD. The emissions were modeled as if all construction would occur within the SDAPCD, and then the emissions were apportioned appropriately between the two air districts for evaluation of impact significance.
 2. Per SDG&E's administrative safety controls, only one type of helicopter would be used for construction at a time during any given day. However, it is reasonable that both types of helicopters might be used on-site. The light duty helicopter might ferry crews to remote locations, followed by the heavy duty helicopter installing/removing poles. Therefore, to provide maximum flexibility in the construction approach, a conservative peak helicopter emissions calculation was assumed that summed the peak daily usage for each helicopter.
 3. The CO_{2e} for helicopter emissions was calculated via the USEPA's Greenhouse Gas Equivalencies Calculator, located at: <http://www2.epa.gov/energy/greenhouse-gas-equivalencies-calculator>
- N/A = not available or not applicable

Winter Peak Estimated Emissions from the Proposed Project within the SDAPCD and SCAPCD

Emission Source	Emissions (lbs/day)						Emissions (metric tons/year)			
	VOCs	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}	CO ₂	CH ₄	N ₂ O	CO _{2e}
Proposed Project Emissions within the SDAPCD										
Construction Emissions	12.834	141.833	75.504	0.259	7.986	5.521	4,249.652	0.967	0.000	4,269.954
Helicopter Emissions	50.743	26.100	121.348	N/A	2.120	19.083	N/A	N/A	N/A	575.700
Total Emissions (lbs/day)	63.577	167.933	196.853	0.259	10.106	24.603	N/A	N/A	N/A	N/A
Significance Thresholds (lbs/day)	75	250	550	250	100	55	N/A	N/A	N/A	N/A
Exceeds Air Quality Significance Threshold Standards?	No	No	No	No	No	No	N/A	N/A	N/A	N/A
Proposed Project Emissions within the SCAQMD										
Construction Emissions	0.675	7.465	3.974	0.014	0.420	0.291	223.666	0.051	0.000	224.734
Helicopter Emissions	2.671	1.374	6.387	N/A	0.112	1.004	N/A	N/A	N/A	30.300
Total Emissions (lbs/day)	3.346	8.839	10.361	0.014	0.532	1.295	N/A	N/A	N/A	N/A
Significance Thresholds (lbs/day)	75	100	550	150	100	55	N/A	N/A	N/A	N/A
Exceeds Air Quality Significance Threshold Standards?	No	No	No	No	No	No	N/A	N/A	N/A	N/A

- Notes:
1. Since the project is located within two air districts (SDAPCD and SCAQMD), the projected emissions were separated by air district. It was estimated that 95% of the construction effort would occur within SDAPCD, and 5% would occur within SCAQMD. The emissions were modeled as if all construction would occur within the SDAPCD, and then the emissions were apportioned appropriately between the two air districts for evaluation of impact significance.
 2. Per SDG&E's administrative safety controls, only one type of helicopter would be used for construction at a time during any given day. However, it is reasonable that both types of helicopters might be used on-site. The light duty helicopter might ferry crews to remote locations, followed by the heavy duty helicopter installing/removing poles. Therefore, to provide maximum flexibility in the construction approach, a conservative peak helicopter emissions calculation was assumed that summed the peak daily usage for each helicopter
 3. The CO_{2e} for helicopter emissions was calculated via the USEPA's Greenhouse Gas Equivalencies Calculator, located at: <http://www2.epa.gov/energy/greenhouse-gas-equivalencies-calculator>
- N/A = not available or not applicable

SDG&E Tie Line 695/6971 Reconductor Project
San Diego Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	98.33	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Selected General Light Industry as the most appropriate default land use type. Assumed that "Lot acreage" was equivalent to the total area of site disturbance as described in Section 4.3 within the document.

Construction Phase - The construction phasing is per the construction schedule within the PEA.

Off-road Equipment - Off-highway trucks = water truck, spray truck. Crew trucks and pickup trucks are included within the worker VMT calculations.

Off-road Equipment - Off-highway trucks = water trucks (3), tractor trailer units (3), and bucket trucks (3).

Off-road Equipment - Off-road Equipment - Off-highway trucks = water trucks (2), and cement trucks (10). Crew trucks are counted in the worker VMT calculations.

Off-road Equipment - Off-highway trucks = water trucks (2), and cement trucks (10). Crew trucks are counted in the worker VMT calculations.

Off-road Equipment - Off-highway trucks = water trucks (2), tractor trailer units (2). Other construction equipment = mowers (2).

Off-road Equipment - Off-highway trucks = water trucks (3), boom trucks (3), bucket trucks (3), wire truck, pulling rig. Crew trucks and pickups are included within the worker VMT calculations.

Off-road Equipment - Off-highway trucks = water truck, bucket trucks (2), and wire dolly.

Trips and VMT - Trips and VMT-worker trips based on the max # of workers/phase. Assumed 10 haul trips/day for trenching, and 2 haul trips/day for staging yard construction. Vendor trips estimated to be 2 trips/day for each water truck/cement truck, 30 miles one-way.

Grading - Grading-site preparation activities would occur at approximately 10.25 acres total. Assumed half that amount for total acres disturbed from demobilization activities. Trenching operations will generate up to approximately 2,900 cubic yards total.

Construction Off-road Equipment Mitigation - Construction Off-road Equipment Mitigation - Mitigation measures: water exposed areas for dust control, and replace ground cover of disturbed areas.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1,550.00	50.00
tblConstructionPhase	NumDays	1,550.00	90.00
tblConstructionPhase	NumDays	1,550.00	60.00
tblConstructionPhase	NumDays	155.00	10.00
tblConstructionPhase	NumDays	60.00	30.00
tblConstructionPhase	NumDays	60.00	40.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	9/25/2018	7/30/2018
tblConstructionPhase	PhaseEndDate	9/12/2018	7/28/2018
tblConstructionPhase	PhaseEndDate	9/14/2018	8/31/2018
tblConstructionPhase	PhaseStartDate	2/4/2018	2/5/2018
tblConstructionPhase	PhaseStartDate	7/18/2018	5/22/2018
tblConstructionPhase	PhaseStartDate	9/1/2018	7/18/2018
tblConstructionPhase	PhaseStartDate	7/31/2018	7/17/2018
tblGrading	AcresOfGrading	22.50	29.50
tblGrading	AcresOfGrading	17.50	29.50
tblLandUse	LotAcreage	0.00	98.33
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	12.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	9.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	11.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Direct Bury Construction and Pole Installation
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Direct Bury Construction and Pole Installation
tblOffRoadEquipment	PhaseName		Trenching for Installation of Underground Cables
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation
tblOffRoadEquipment	PhaseName		Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation
tblOffRoadEquipment	PhaseName		Demobilization/Clean Up/Road Refreshing
tblOffRoadEquipment	PhaseName		Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Direct Bury Construction and Pole Installation
tblOffRoadEquipment	PhaseName		Stringing Activities/ Transfer Conductor/Sagging Activities
tblOffRoadEquipment	PhaseName		Demobilization/Clean Up/Road Refreshing

tblOffRoadEquipment	PhaseName	Trenching for Installation of Underground Cables
tblOffRoadEquipment	PhaseName	Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation

tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	UsageHours	7.00	5.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripNumber	0.00	363.00
tblTripsAndVMT	VendorTripLength	7.30	69.00
tblTripsAndVMT	VendorTripLength	7.30	69.00
tblTripsAndVMT	VendorTripLength	7.30	69.00
tblTripsAndVMT	VendorTripLength	7.30	69.00
tblTripsAndVMT	VendorTripLength	7.30	69.00
tblTripsAndVMT	VendorTripLength	7.30	69.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	24.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	23.00	14.00
tblTripsAndVMT	WorkerTripNumber	0.00	12.00
tblTripsAndVMT	WorkerTripNumber	0.00	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	24.00

tblTripsAndVMT	WorkerTripNumber	10.00	14.00
tblTripsAndVMT	WorkerTripNumber	20.00	16.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	13.4547	148.6374	78.5132	0.2737	4.1894	5.4241	9.0121	1.0204	5.0083	5.8764	0.0000	27,072.7923	27,072.7923	6.1464	0.0000	27,201.8660
Total	13.4547	148.6374	78.5132	0.2737	4.1894	5.4241	9.0121	1.0204	5.0083	5.8764	0.0000	27,072.7923	27,072.7923	6.1464	0.0000	27,201.8660

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	13.4547	148.6374	78.5132	0.2737	3.5833	5.4241	8.4060	0.9550	5.0083	5.8109	0.0000	27,072.7923	27,072.7923	6.1464	0.0000	27,201.8659
Total	13.4547	148.6374	78.5132	0.2737	3.5833	5.4241	8.4060	0.9550	5.0083	5.8109	0.0000	27,072.7923	27,072.7923	6.1464	0.0000	27,201.8659

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	14.47	0.00	6.73	6.41	0.00	1.11	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days/Week	Num Days	Phase Description
1	Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Site Preparation	1/1/2018	2/3/2018	6	30	
2	Pier Foundation and Micropile Construction	Building Construction	2/5/2018	4/3/2018	6	50	
3	Direct Bury Construction and Pole Installation	Building Construction	4/4/2018	7/17/2018	6	90	
4	Stringing Activities/Transfer Conductor/Sagging Activities	Building Construction	5/22/2018	7/30/2018	6	60	
5	Demobilization/Clean Up/Road Refreshing	Site Preparation	7/17/2018	8/31/2018	6	40	
6	Trenching for Installation of Underground Cables	Grading	7/18/2018	7/28/2018	6	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Dumpers/Tenders	1	3.00	16	0.38
Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Graders	2	6.00	174	0.41
Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Off-Highway Trucks	4	3.00	400	0.38
Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Other Construction Equipment	2	7.00	171	0.42
Pier Foundation and Micropile Construction	Air Compressors	3	5.00	78	0.48
Pier Foundation and Micropile Construction	Bore/Drill Rigs	3	7.00	205	0.50
Pier Foundation and Micropile Construction	Cement and Mortar Mixers	1	4.00	9	0.56
Pier Foundation and Micropile Construction	Forklifts	3	4.00	89	0.20
Pier Foundation and Micropile Construction	Off-Highway Trucks	12	3.00	400	0.38
Direct Bury Construction and Pole Installation	Air Compressors	3	3.00	78	0.48
Direct Bury Construction and Pole Installation	Bore/Drill Rigs	3	7.00	205	0.50
Direct Bury Construction and Pole Installation	Cranes	3	5.00	226	0.29
Direct Bury Construction and Pole Installation	Off-Highway Trucks	9	4.00	400	0.38
Stringing Activities/Transfer Conductor/Sagging Activities	Off-Highway Trucks	11	4.00	400	0.38

Demobilization/Clean Up/Road Refreshing	Graders	1	7.00	174	0.41
Demobilization/Clean Up/Road Refreshing	Off-Highway Trucks	2	6.00	400	0.38
Demobilization/Clean Up/Road Refreshing	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Trenching for Installation of Underground Cables	Bore/Drill Rigs	1	6.00	205	0.50
Trenching for Installation of Underground Cables	Off-Highway Trucks	4	3.00	400	0.38
Trenching for Installation of Underground Cables	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Pier Foundation and Micropile Construction	Dumpers/Tenders	1	4.00	16	0.38
Pier Foundation and Micropile Construction	Excavators	1	4.00	162	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
	9	14.00	2.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Pier Foundation and Micropile Construction	22	12.00	8.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Direct Bury Construction and Pole Installation	18	60.00	24.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Stringing Activities/Transfer Conductor/Sagging Activities	11	24.00	6.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Demobilization/Clean Up/Road Refreshing	4	14.00	2.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Trenching for Installation of Underground Cables	8	16.00	2.00	363.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0428	0.0000	1.0428	0.1126	0.0000	0.1126			0.0000			0.0000
Off-Road	3.3975	35.6059	20.6005	0.0401		1.7157	1.7157		1.5790	1.5790		4,027.7900	4,027.7900	1.2492		4,054.0241
Total	3.3975	35.6059	20.6005	0.0401	1.0428	1.7157	2.7585	0.1126	1.5790	1.6916		4,027.7900	4,027.7900	1.2492		4,054.0241

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0729	1.1288	0.5311	4.1600e-003	0.1251	0.0211	0.1461	0.0356	0.0194	0.0550		406.3627	406.3627	2.6300e-003		406.4180
Worker	0.0406	0.0476	0.5142	1.4600e-003	0.1150	8.2000e-004	0.1158	0.0305	7.6000e-004	0.0313		112.5175	112.5175	5.2400e-003		112.6276
Total	0.1134	1.1764	1.0453	5.6200e-003	0.2401	0.0219	0.2619	0.0661	0.0201	0.0863		518.8802	518.8802	7.8700e-003		519.0456

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2346	0.0000	0.2346	0.0253	0.0000	0.0253			0.0000			0.0000
Off-Road	3.3975	35.6059	20.6005	0.0401		1.7157	1.7157		1.5790	1.5790	0.0000	4,027.7900	4,027.7900	1.2492		4,054.0241
Total	3.3975	35.6059	20.6005	0.0401	0.2346	1.7157	1.9503	0.0253	1.5790	1.6043	0.0000	4,027.7900	4,027.7900	1.2492		4,054.0241

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0729	1.1288	0.5311	4.1600e-003	0.1251	0.0211	0.1461	0.0356	0.0194	0.0550		406.3627	406.3627	2.6300e-003		406.4180
Worker	0.0406	0.0476	0.5142	1.4600e-003	0.1150	8.2000e-004	0.1158	0.0305	7.6000e-004	0.0313		112.5175	112.5175	5.2400e-003		112.6276
Total	0.1134	1.1764	1.0453	5.6200e-003	0.2401	0.0219	0.2619	0.0661	0.0201	0.0863		518.8802	518.8802	7.8700e-003		519.0456

3.3 Pier Foundation and Micropile Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Off-Road	5.4242	56.8741	32.3178	0.0952		2.3074	2.3074		2.1543	2.1543		9,509.3633	9,509.3633	2.7968		9,568.0951
Total	5.4242	56.8741	32.3178	0.0952		2.3074	2.3074		2.1543	2.1543		9,509.3633	9,509.3633	2.7968		9,568.0951

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2915	4.5152	2.1245	0.0166	0.5002	0.0842	0.5844	0.1425	0.0775	0.2200		1,625.4507	1,625.4507	0.0105		1,625.6720
Worker	0.0348	0.0408	0.4408	1.2500e-003	0.0986	7.0000e-004	0.0993	0.0262	6.5000e-004	0.0268		96.4436	96.4436	4.4900e-003		96.5379
Total	0.3262	4.5561	2.5652	0.0179	0.5988	0.0849	0.6837	0.1687	0.0781	0.2468		1,721.8943	1,721.8943	0.0150		1,722.2099

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.4242	55.2870	32.3178	0.0952		2.3074	2.3074		2.1543	2.1543	0.0000	9,509.3633	9,509.3633	2.7968		9,568.0951
Total	5.4242	55.2870	32.3178	0.0952		2.3074	2.3074		2.1543	2.1543	0.0000	9,509.3633	9,509.3633	2.7968		9,568.0951

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2915	4.5152	2.1245	0.0166	0.5002	0.0842	0.5844	0.1425	0.0775	0.2200		1,625.4507	1,625.4507	0.0105		1,625.6720
Worker	0.0348	0.0408	0.4408	1.2500e-003	0.0986	7.0000e-004	0.0993	0.0262	6.5000e-004	0.0268		96.4436	96.4436	4.4900e-003		96.5379
Total	0.3262	4.5561	2.5652	0.0179	0.5988	0.0849	0.6837	0.1687	0.0781	0.2468		1,721.8943	1,721.8943	0.0150		1,722.2099

3.4 Direct Bury Construction and Pole Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day				
Off-Road	5.6910	63.0143	31.3140	0.0971		2.4167	2.4167		2.2414	2.2414	9,740.1934	9,740.1934	2.9409		9,801.9532
Total	5.6910	63.0143	31.3140	0.0971		2.4167	2.4167		2.2414	2.2414	9,740.1934	9,740.1934	2.9409		9,801.9532

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8744	13.5457	6.3734	0.0499	1.5006	0.2526	1.7532	0.4276	0.2324	0.6600		4,876.3521	4,876.3521	0.0316		4,877.0159
Worker	0.1738	0.2041	2.2038	6.2400e-003	0.4929	3.5200e-003	0.4964	0.1307	3.2500e-003	0.1340		482.2178	482.2178	0.0225		482.6896
Total	1.0482	13.7498	8.5772	0.0562	1.9935	0.2561	2.2496	0.5583	0.2356	0.7940		5,358.5699	5,358.5699	0.0541		5,359.7056

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
Off-Road	5.6910	63.0143	31.3140	0.0971		2.4167	2.4167		2.2414	2.2414	0.0000	9,740.1934	9,740.1934	2.9409		9,801.9532
Total	5.6910	63.0143	31.3140	0.0971		2.4167	2.4167		2.2414	2.2414	0.0000	9,740.1934	9,740.1934	2.9409		9,801.9532

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8744	13.5457	6.3734	0.0499	1.5006	0.2526	1.7532	0.4276	0.2324	0.6600		4,876.3521	4,876.3521	0.0316		4,877.0159

Worker	0.1738	0.2041	2.2038	6.2400e-003	0.4929	3.5200e-003	0.4964	0.1307	3.2500e-003	0.1340		482.2178	482.2178	0.0225		482.6896
Total	1.0482	13.7498	8.5772	0.0562	1.9935	0.2561	2.2496	0.5583	0.2356	0.7940		5,358.5699	5,358.5699	0.0541		5,359.7056

3.5 Stringing Activities/Transfer Conductor/Sagging Activities - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2321	45.5598	22.9941	0.0723		1.6629	1.6629		1.5299	1.5299		7,276.5060	7,276.5060	2.2653		7,324.0768
Total	4.2321	45.5598	22.9941	0.0723		1.6629	1.6629		1.5299	1.5299		7,276.5060	7,276.5060	2.2653		7,324.0768

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2186	3.3864	1.5934	0.0125	0.3752	0.0632	0.4383	0.1069	0.0581	0.1650		1,219.0880	1,219.0880	7.9000e-003		1,219.2540
Worker	0.0695	0.0817	0.8815	2.5000e-003	0.1972	1.4100e-003	0.1986	0.0523	1.3000e-003	0.0536		192.8871	192.8871	8.9900e-003		193.0759
Total	0.2881	3.4681	2.4749	0.0150	0.5723	0.0646	0.6369	0.1592	0.0594	0.2186		1,411.9751	1,411.9751	0.0169		1,412.3298

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
Off-Road	4.2321	45.5598	22.9941	0.0723		1.6629	1.6629		1.5299	1.5299	0.0000	7,276.5060	7,276.5060	2.2653		7,324.0768
Total	4.2321	45.5598	22.9941	0.0723		1.6629	1.6629		1.5299	1.5299	0.0000	7,276.5060	7,276.5060	2.2653		7,324.0768

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2186	3.3864	1.5934	0.0125	0.3752	0.0632	0.4383	0.1069	0.0581	0.1650		1,219.0880	1,219.0880	7.9000e-003		1,219.2540
Worker	0.0695	0.0817	0.8815	2.5000e-003	0.1972	1.4100e-003	0.1986	0.0523	1.3000e-003	0.0536		192.8871	192.8871	8.9900e-003		193.0759
Total	0.2881	3.4681	2.4749	0.0150	0.5723	0.0646	0.6369	0.1592	0.0594	0.2186		1,411.9751	1,411.9751	0.0169		1,412.3298

3.6 Demobilization/Clean Up/Road Refreshing - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7821	0.0000	0.7821	0.0845	0.0000	0.0845			0.0000			0.0000
Off-Road	2.0819	21.6690	12.1077	0.0275		1.0020	1.0020		0.9219	0.9219		2,766.6677	2,766.6677	0.8613		2,784.7550
Total	2.0819	21.6690	12.1077	0.0275	0.7821	1.0020	1.7841	0.0845	0.9219	1.0063		2,766.6677	2,766.6677	0.8613		2,784.7550

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0729	1.1288	0.5311	4.1600e-003	0.1251	0.0211	0.1461	0.0356	0.0194	0.0550		406.3627	406.3627	2.6300e-003		406.4180
Worker	0.0406	0.0476	0.5142	1.4600e-003	0.1150	8.2000e-004	0.1158	0.0305	7.6000e-004	0.0313		112.5175	112.5175	5.2400e-003		112.6276
Total	0.1134	1.1764	1.0453	5.6200e-003	0.2401	0.0219	0.2619	0.0661	0.0201	0.0863		518.8802	518.8802	7.8700e-003		519.0456

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1760	0.0000	0.1760	0.0190	0.0000	0.0190			0.0000			0.0000
Off-Road	2.0819	21.6690	12.1077	0.0275		1.0020	1.0020		0.9219	0.9219	0.0000	2,766.6677	2,766.6677	0.8613		2,784.7550
Total	2.0819	21.6690	12.1077	0.0275	0.1760	1.0020	1.1780	0.0190	0.9219	0.9409	0.0000	2,766.6677	2,766.6677	0.8613		2,784.7550

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0729	1.1288	0.5311	4.1600e-003	0.1251	0.0211	0.1461	0.0356	0.0194	0.0550		406.3627	406.3627	2.6300e-003		406.4180
Worker	0.0406	0.0476	0.5142	1.4600e-003	0.1150	8.2000e-004	0.1158	0.0305	7.6000e-004	0.0313		112.5175	112.5175	5.2400e-003		112.6276
Total	0.1134	1.1764	1.0453	5.6200e-003	0.2401	0.0219	0.2619	0.0661	0.0201	0.0863		518.8802	518.8802	7.8700e-003		519.0456

3.7 Trenching for Installation of Underground Cables - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.0623	22.2477	13.8602	0.0344		1.0251	1.0251		0.9431	0.9431		3,462.5265	3,462.5265	1.0779		3,485.1630
Total	2.0623	22.2477	13.8602	0.0344	0.0000	1.0251	1.0251	0.0000	0.9431	0.9431		3,462.5265	3,462.5265	1.0779		3,485.1630

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.6597	28.2841	12.8779	0.0982	2.3384	0.4420	2.7804	0.6401	0.4066	1.0467		9,607.6117	9,607.6117	0.0637		9,608.9497
Vendor	0.0729	1.1288	0.5311	4.1600e-003	0.1251	0.0211	0.1461	0.0356	0.0194	0.0550		406.3627	406.3627	2.6300e-003		406.4180
Worker	0.0463	0.0544	0.5877	1.6600e-003	0.1314	9.4000e-004	0.1324	0.0349	8.7000e-004	0.0357		128.5914	128.5914	5.9900e-003		128.7172
Total	1.7789	29.4673	13.9967	0.1040	2.5949	0.4639	3.0589	0.7106	0.4268	1.1374		10,142.5658	10,142.5658	0.0723		10,144.0849

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.0623	22.2477	13.8602	0.0344		1.0251	1.0251		0.9431	0.9431	0.0000	3,462.5265	3,462.5265	1.0779		3,485.1630
Total	2.0623	22.2477	13.8602	0.0344	0.0000	1.0251	1.0251	0.0000	0.9431	0.9431	0.0000	3,462.5265	3,462.5265	1.0779		3,485.1630

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.6597	28.2841	12.8779	0.0982	2.3384	0.4420	2.7804	0.6401	0.4066	1.0467		9,607.6117	9,607.6117	0.0637		9,608.9497
Vendor	0.0729	1.1288	0.5311	4.1600e-003	0.1251	0.0211	0.1461	0.0356	0.0194	0.0550		406.3627	406.3627	2.6300e-003		406.4180
Worker	0.0463	0.0544	0.5877	1.6600e-003	0.1314	9.4000e-004	0.1324	0.0349	8.7000e-004	0.0357		128.5914	128.5914	5.9900e-003		128.7172
Total	1.7789	29.4673	13.9967	0.1040	2.5949	0.4639	3.0589	0.7106	0.4268	1.1374		10,142.5658	10,142.5658	0.0723		10,144.0849

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
General Light Industry	0.00	0.00	0.00		

Total	0.00	0.00	0.00		
-------	------	------	------	--	--

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

SDG&E Tie Line 695/6971 Reconductor Project
San Diego Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	98.33	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Selected General Light Industry as the most appropriate default land use type. Assumed that "Lot acreage" was equivalent to the total area of site disturbance as described in Section 4.3 within the document.

Construction Phase - The construction phasing is per the construction schedule within the PEA.

Off-road Equipment - Off-highway trucks = water truck, spray truck. Crew trucks and pickup trucks are included within the worker VMT calculations.

Off-road Equipment - Off-highway trucks = water trucks (3), tractor trailer units (3), and bucket trucks (3).

Off-road Equipment - Off-road Equipment - Off-highway trucks = water trucks (2), and cement trucks (10). Crew trucks are counted in the worker VMT calculations.

Off-road Equipment - Off-highway trucks = water trucks (2), and cement trucks (10). Crew trucks are counted in the worker VMT calculations.

Off-road Equipment - Off-highway trucks = water trucks (2), tractor trailer units (2). Other construction equipment = mowers (2).

Off-road Equipment - Off-highway trucks = water trucks (3), boom trucks (3), bucket trucks (3), wire truck, pulling rig. Crew trucks and pickups are included within the worker VMT calculations.

Off-road Equipment - Off-highway trucks = water truck, bucket trucks (2), and wire dolly.

Trips and VMT - Trips and VMT-worker trips based on the max # of workers/phase. Assumed 10 haul trips/day for trenching, and 2 haul trips/day for staging yard construction. Vendor trips estimated to be 2 trips/day for each water truck/cement truck, 30 miles one-way.

Grading - Grading-site preparation activities would occur at approximately 10.25 acres total. Assumed half that amount for total acres disturbed from demobilization activities. Trenching operations will generate up to approximately 2,900 cubic yards total.

Construction Off-road Equipment Mitigation - Construction Off-road Equipment Mitigation - Mitigation measures: water exposed areas for dust control, and replace ground cover of disturbed areas.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1,550.00	50.00
tblConstructionPhase	NumDays	1,550.00	90.00
tblConstructionPhase	NumDays	1,550.00	60.00
tblConstructionPhase	NumDays	155.00	10.00
tblConstructionPhase	NumDays	60.00	30.00
tblConstructionPhase	NumDays	60.00	40.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	9/25/2018	7/30/2018
tblConstructionPhase	PhaseEndDate	9/12/2018	7/28/2018
tblConstructionPhase	PhaseEndDate	9/14/2018	8/31/2018
tblConstructionPhase	PhaseStartDate	2/4/2018	2/5/2018
tblConstructionPhase	PhaseStartDate	7/18/2018	5/22/2018
tblConstructionPhase	PhaseStartDate	9/1/2018	7/18/2018
tblConstructionPhase	PhaseStartDate	7/31/2018	7/17/2018
tblGrading	AcresOfGrading	22.50	29.50
tblGrading	AcresOfGrading	17.50	29.50
tblLandUse	LotAcreage	0.00	98.33
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	12.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	9.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	11.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Direct Bury Construction and Pole Installation
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Direct Bury Construction and Pole Installation
tblOffRoadEquipment	PhaseName		Trenching for Installation of Underground Cables
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation
tblOffRoadEquipment	PhaseName		Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation
tblOffRoadEquipment	PhaseName		Demobilization/Clean Up/Road Refreshing
tblOffRoadEquipment	PhaseName		Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Direct Bury Construction and Pole Installation
tblOffRoadEquipment	PhaseName		Stringing Activities/ Transfer Conductor/Sagging Activities
tblOffRoadEquipment	PhaseName		Demobilization/Clean Up/Road Refreshing

tblOffRoadEquipment	PhaseName	Trenching for Installation of Underground Cables
tblOffRoadEquipment	PhaseName	Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation

tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
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tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripLength	20.00	74.00
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tblTripsAndVMT	HaulingTripLength	20.00	74.00
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tblTripsAndVMT	VendorTripLength	7.30	69.00
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tblTripsAndVMT	VendorTripNumber	0.00	24.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	23.00	14.00
tblTripsAndVMT	WorkerTripNumber	0.00	12.00
tblTripsAndVMT	WorkerTripNumber	0.00	60.00

tbITripsAndVMT	WorkerTripNumber	0.00	24.00
tbITripsAndVMT	WorkerTripNumber	10.00	14.00
tbITripsAndVMT	WorkerTripNumber	20.00	16.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	13.5096	149.2975	79.4784	0.2730	4.1894	5.4245	9.0125	1.0204	5.0086	5.8767	0.0000	27,019.0845	27,019.0845	6.1465	0.0000	27,148.1614
Total	13.5096	149.2975	79.4784	0.2730	4.1894	5.4245	9.0125	1.0204	5.0086	5.8767	0.0000	27,019.0845	27,019.0845	6.1465	0.0000	27,148.1614

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	13.5096	149.2975	79.4784	0.2730	3.5833	5.4245	8.4064	0.9550	5.0086	5.8113	0.0000	27,019.0845	27,019.0845	6.1465	0.0000	27,148.1614
Total	13.5096	149.2975	79.4784	0.2730	3.5833	5.4245	8.4064	0.9550	5.0086	5.8113	0.0000	27,019.0845	27,019.0845	6.1465	0.0000	27,148.1614

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	14.47	0.00	6.73	6.41	0.00	1.11	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Area	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Site Preparation	1/1/2018	2/3/2018	6	30	
2	Pier Foundation and Micropile Construction	Building Construction	2/5/2018	4/3/2018	6	50	
3	Direct Bury Construction and Pole Installation	Building Construction	4/4/2018	7/17/2018	6	90	
4	Stringing Activities/Transfer Conductor/Sagging Activities	Building Construction	5/22/2018	7/30/2018	6	60	
5	Demobilization/Clean Up/Road Refreshing	Site Preparation	7/17/2018	8/31/2018	6	40	
6	Trenching for Installation of Underground Cables	Grading	7/18/2018	7/28/2018	6	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Dumpers/Tenders	1	3.00	16	0.38

Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Graders	2	6.00	174	0.41
Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Off-Highway Trucks	4	3.00	400	0.38
Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Other Construction Equipment	2	7.00	171	0.42
Pier Foundation and Micropile Construction	Air Compressors	3	5.00	78	0.48
Pier Foundation and Micropile Construction	Bore/Drill Rigs	3	7.00	205	0.50
Pier Foundation and Micropile Construction	Cement and Mortar Mixers	1	4.00	9	0.56
Pier Foundation and Micropile Construction	Forklifts	3	4.00	89	0.20
Pier Foundation and Micropile Construction	Off-Highway Trucks	12	3.00	400	0.38
Direct Bury Construction and Pole Installation	Air Compressors	3	3.00	78	0.48
Direct Bury Construction and Pole Installation	Bore/Drill Rigs	3	7.00	205	0.50
Direct Bury Construction and Pole Installation	Cranes	3	5.00	226	0.29
Direct Bury Construction and Pole Installation	Off-Highway Trucks	9	4.00	400	0.38
Stringing Activities/Transfer Conductor/Sagging Activities	Off-Highway Trucks	11	4.00	400	0.38
Demobilization/Clean Up/Road Refreshing	Graders	1	7.00	174	0.41
Demobilization/Clean Up/Road Refreshing	Off-Highway Trucks	2	6.00	400	0.38
Demobilization/Clean Up/Road Refreshing	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Trenching for Installation of Underground Cables	Bore/Drill Rigs	1	6.00	205	0.50
Trenching for Installation of Underground Cables	Off-Highway Trucks	4	3.00	400	0.38
Trenching for Installation of Underground Cables	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Pier Foundation and Micropile Construction	Dumpers/Tenders	1	4.00	16	0.38
Pier Foundation and Micropile Construction	Excavators	1	4.00	162	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Sign Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	9	14.00	2.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Pier Foundation and Micropile Construction	22	12.00	8.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Direct Bury Construction and Pole Installation	18	60.00	24.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Stringing Activities/Transfer Conductor/Sagging Activities	11	24.00	6.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Demobilization/Clean Up/Road Refreshing	4	14.00	2.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Trenching for Installation of Underground Cables	8	16.00	2.00	363.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0428	0.0000	1.0428	0.1126	0.0000	0.1126			0.0000			0.0000
Off-Road	3.3975	35.6059	20.6005	0.0401		1.7157	1.7157		1.5790	1.5790		4,027.7900	4,027.7900	1.2492		4,054.0241
Total	3.3975	35.6059	20.6005	0.0401	1.0428	1.7157	2.7585	0.1126	1.5790	1.6916		4,027.7900	4,027.7900	1.2492		4,054.0241

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0754	1.1675	0.6000	4.1600e-003	0.1251	0.0211	0.1461	0.0356	0.0194	0.0550		406.0072	406.0072	2.6400e-003		406.0627
Worker	0.0427	0.0534	0.4946	1.3700e-003	0.1150	8.2000e-004	0.1158	0.0305	7.6000e-004	0.0313		105.6574	105.6574	5.2400e-003		105.7675
Total	0.1181	1.2210	1.0946	5.5300e-003	0.2401	0.0219	0.2620	0.0661	0.0202	0.0863		511.6646	511.6646	7.8800e-003		511.8303

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2346	0.0000	0.2346	0.0253	0.0000	0.0253			0.0000			0.0000
Off-Road	3.3975	35.6059	20.6005	0.0401		1.7157	1.7157		1.5790	1.5790	0.0000	4,027.7900	4,027.7900	1.2492		4,054.0241
Total	3.3975	35.6059	20.6005	0.0401	0.2346	1.7157	1.9503	0.0253	1.5790	1.6043	0.0000	4,027.7900	4,027.7900	1.2492		4,054.0241

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0754	1.1675	0.6000	4.1600e-003	0.1251	0.0211	0.1461	0.0356	0.0194	0.0550		406.0072	406.0072	2.6400e-003		406.0627
Worker	0.0427	0.0534	0.4946	1.3700e-003	0.1150	8.2000e-004	0.1158	0.0305	7.6000e-004	0.0313		105.6574	105.6574	5.2400e-003		105.7675
Total	0.1181	1.2210	1.0946	5.5300e-003	0.2401	0.0219	0.2620	0.0661	0.0202	0.0863		511.6646	511.6646	7.8800e-003		511.8303

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3014	4.6701	2.4002	0.0166	0.5002	0.0843	0.5845	0.1425	0.0776	0.2201		1,624.0289	1,624.0289	0.0106		1,624.2510
Worker	0.0366	0.0458	0.4239	1.1700e-003	0.0986	7.0000e-004	0.0993	0.0262	6.5000e-004	0.0268		90.5635	90.5635	4.4900e-003		90.6579
Total	0.3380	4.7159	2.8241	0.0178	0.5988	0.0850	0.6838	0.1687	0.0782	0.2469		1,714.5924	1,714.5924	0.0151		1,714.9088

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.4242	55.2870	32.3178	0.0952		2.3074	2.3074		2.1543	2.1543	0.0000	9,509.3633	9,509.3633	2.7968		9,568.0951
Total	5.4242	55.2870	32.3178	0.0952		2.3074	2.3074		2.1543	2.1543	0.0000	9,509.3633	9,509.3633	2.7968		9,568.0951

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3014	4.6701	2.4002	0.0166	0.5002	0.0843	0.5845	0.1425	0.0776	0.2201		1,624.0289	1,624.0289	0.0106		1,624.2510
Worker	0.0366	0.0458	0.4239	1.1700e-003	0.0986	7.0000e-004	0.0993	0.0262	6.5000e-004	0.0268		90.5635	90.5635	4.4900e-003		90.6579
Total	0.3380	4.7159	2.8241	0.0178	0.5988	0.0850	0.6838	0.1687	0.0782	0.2469		1,714.5924	1,714.5924	0.0151		1,714.9088

3.4 Direct Bury Construction and Pole Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.6910	63.0143	31.3140	0.0971		2.4167	2.4167		2.2414	2.2414		9,740.1934	9,740.1934	2.9409		9,801.9532
Total	5.6910	63.0143	31.3140	0.0971		2.4167	2.4167		2.2414	2.2414		9,740.1934	9,740.1934	2.9409		9,801.9532

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.9042	14.0102	7.2004	0.0499	1.5006	0.2529	1.7535	0.4276	0.2326	0.6602	4,872.0866	4,872.0866	0.0317		4,872.7528	
Worker	0.1831	0.2290	2.1196	5.8600e-003	0.4929	3.5200e-003	0.4964	0.1307	3.2500e-003	0.1340	452.8175	452.8175	0.0225		453.2894	
Total	1.0873	14.2393	9.3201	0.0557	1.9935	0.2564	2.2499	0.5583	0.2359	0.7942	5,324.9041	5,324.9041	0.0542		5,326.0422	

3.5 Stringing Activities/Transfer Conductor/Sagging Activities - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2321	45.5598	22.9941	0.0723		1.6629	1.6629		1.5299	1.5299		7,276.5060	7,276.5060	2.2653		7,324.0768
Total	4.2321	45.5598	22.9941	0.0723		1.6629	1.6629		1.5299	1.5299		7,276.5060	7,276.5060	2.2653		7,324.0768

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2261	3.5026	1.8001	0.0125	0.3752	0.0632	0.4384	0.1069	0.0582	0.1651		1,218.0217	1,218.0217	7.9300e-003		1,218.1882
Worker	0.0732	0.0916	0.8479	2.3400e-003	0.1972	1.4100e-003	0.1986	0.0523	1.3000e-003	0.0536		181.1270	181.1270	8.9900e-003		181.3158
Total	0.2993	3.5942	2.6480	0.0148	0.5723	0.0646	0.6369	0.1592	0.0595	0.2187		1,399.1487	1,399.1487	0.0169		1,399.5040

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.2321	45.5598	22.9941	0.0723		1.6629	1.6629		1.5299	1.5299	0.0000	7,276.5060	7,276.5060	2.2653		7,324.0768
Total	4.2321	45.5598	22.9941	0.0723		1.6629	1.6629		1.5299	1.5299	0.0000	7,276.5060	7,276.5060	2.2653		7,324.0768

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2261	3.5026	1.8001	0.0125	0.3752	0.0632	0.4384	0.1069	0.0582	0.1651		1,218.0217	1,218.0217	7.9300e-003		1,218.1882
Worker	0.0732	0.0916	0.8479	2.3400e-003	0.1972	1.4100e-003	0.1986	0.0523	1.3000e-003	0.0536		181.1270	181.1270	8.9900e-003		181.3158
Total	0.2993	3.5942	2.6480	0.0148	0.5723	0.0646	0.6369	0.1592	0.0595	0.2187		1,399.1487	1,399.1487	0.0169		1,399.5040

3.6 Demobilization/Clean Up/Road Refreshing - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7821	0.0000	0.7821	0.0845	0.0000	0.0845			0.0000			0.0000
Off-Road	2.0819	21.6690	12.1077	0.0275		1.0020	1.0020		0.9219	0.9219		2,766.6677	2,766.6677	0.8613		2,784.7550
Total	2.0819	21.6690	12.1077	0.0275	0.7821	1.0020	1.7841	0.0845	0.9219	1.0063		2,766.6677	2,766.6677	0.8613		2,784.7550

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0754	1.1675	0.6000	4.1600e-003	0.1251	0.0211	0.1461	0.0356	0.0194	0.0550		406.0072	406.0072	2.6400e-003		406.0627
Worker	0.0427	0.0534	0.4946	1.3700e-003	0.1150	8.2000e-004	0.1158	0.0305	7.6000e-004	0.0313		105.6574	105.6574	5.2400e-003		105.7675
Total	0.1181	1.2210	1.0946	5.5300e-003	0.2401	0.0219	0.2620	0.0661	0.0202	0.0863		511.6646	511.6646	7.8800e-003		511.8303

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day	lb/day
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Fugitive Dust					0.1760	0.0000	0.1760	0.0190	0.0000	0.0190			0.0000			0.0000
Off-Road	2.0819	21.6690	12.1077	0.0275		1.0020	1.0020		0.9219	0.9219	0.0000	2,766.6677	2,766.6677	0.8613		2,784.7550
Total	2.0819	21.6690	12.1077	0.0275	0.1760	1.0020	1.1780	0.0190	0.9219	0.9409	0.0000	2,766.6677	2,766.6677	0.8613		2,784.7550

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0754	1.1675	0.6000	4.1600e-003	0.1251	0.0211	0.1461	0.0356	0.0194	0.0550		406.0072	406.0072	2.6400e-003		406.0627
Worker	0.0427	0.0534	0.4946	1.3700e-003	0.1150	8.2000e-004	0.1158	0.0305	7.6000e-004	0.0313		105.6574	105.6574	5.2400e-003		105.7675
Total	0.1181	1.2210	1.0946	5.5300e-003	0.2401	0.0219	0.2620	0.0661	0.0202	0.0863		511.6646	511.6646	7.8800e-003		511.8303

3.7 Trenching for Installation of Underground Cables - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.0623	22.2477	13.8602	0.0344		1.0251	1.0251		0.9431	0.9431		3,462.5265	3,462.5265	1.0779		3,485.1630
Total	2.0623	22.2477	13.8602	0.0344	0.0000	1.0251	1.0251	0.0000	0.9431	0.9431		3,462.5265	3,462.5265	1.0779		3,485.1630

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.7252	29.2594	14.8475	0.0981	2.3384	0.4423	2.7807	0.6401	0.4069	1.0470		9,601.3972	9,601.3972	0.0640		9,602.7409
Vendor	0.0754	1.1675	0.6000	4.1600e-003	0.1251	0.0211	0.1461	0.0356	0.0194	0.0550		406.0072	406.0072	2.6400e-003		406.0627

Worker	0.0488	0.0611	0.5652	1.5600e-003	0.1314	9.4000e-004	0.1324	0.0349	8.7000e-004	0.0357		120.7513	120.7513	5.9900e-003		120.8772
Total	1.8494	30.4880	16.0128	0.1039	2.5949	0.4643	3.0592	0.7106	0.4271	1.1378		10,128.1557	10,128.1557	0.0726		10,129.6808

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.0623	22.2477	13.8602	0.0344		1.0251	1.0251		0.9431	0.9431	0.0000	3,462.5265	3,462.5265	1.0779		3,485.1630
Total	2.0623	22.2477	13.8602	0.0344	0.0000	1.0251	1.0251	0.0000	0.9431	0.9431	0.0000	3,462.5265	3,462.5265	1.0779		3,485.1630

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day				
	Hauling	1.7252	29.2594	14.8475	0.0981	2.3384	0.4423	2.7807	0.6401	0.4069	1.0470	9,601.3972	9,601.3972	0.0640	9,602.7409
Vendor	0.0754	1.1675	0.6000	4.1600e-003	0.1251	0.0211	0.1461	0.0356	0.0194	0.0550	406.0072	406.0072	2.6400e-003	406.0627	
Worker	0.0488	0.0611	0.5652	1.5600e-003	0.1314	9.4000e-004	0.1324	0.0349	8.7000e-004	0.0357	120.7513	120.7513	5.9900e-003	120.8772	
Total	1.8494	30.4880	16.0128	0.1039	2.5949	0.4643	3.0592	0.7106	0.4271	1.1378	10,128.1557	10,128.1557	0.0726	10,129.6808	

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Miles	Trip %	Trip Purpose %
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Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

Category	lb/day										lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Architectural Coating	0.0000						0.0000	0.0000		0.0000			0.0000			0.0000
Consumer Products	0.0000						0.0000	0.0000		0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Architectural Coating	0.0000						0.0000	0.0000		0.0000			0.0000			0.0000
Consumer Products	0.0000						0.0000	0.0000		0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000		0.0000	0.0000	0.0000		0.0000

Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
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7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

SDG&E Tie Line 695/6971 Reconductor Project
San Diego Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	98.33	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Selected General Light Industry as the most appropriate default land use type. Assumed that "Lot acreage" was equivalent to the total area of site disturbance as described in Section 4.3 within the document.

Construction Phase - The construction phasing is per the construction schedule within the PEA.

Off-road Equipment - Off-highway trucks = water truck, spray truck. Crew trucks and pickup trucks are included within the worker VMT calculations.

Off-road Equipment - Off-highway trucks = water trucks (3), tractor trailer units (3), and bucket trucks (3).

Off-road Equipment - Off-road Equipment - Off-highway trucks = water trucks (2), and cement trucks (10). Crew trucks are counted in the worker VMT calculations.

Off-road Equipment - Off-highway trucks = water trucks (2), and cement trucks (10). Crew trucks are counted in the worker VMT calculations.

Off-road Equipment - Off-highway trucks = water trucks (2), tractor trailer units (2). Other construction equipment = mowers (2).

Off-road Equipment - Off-highway trucks = water trucks (3), boom trucks (3), bucket trucks (3), wire truck, pulling rig. Crew trucks and pickups are included within the worker VMT calculations.

Off-road Equipment - Off-highway trucks = water truck, bucket trucks (2), and wire dolly.

Trips and VMT - Trips and VMT-worker trips based on the max # of workers/phase. Assumed 10 haul trips/day for trenching, and 2 haul trips/day for staging yard construction. Vendor trips estimated to be 2 trips/day for each water truck/cement truck, 30 miles one-way.

Grading - Grading-site preparation activities would occur at approximately 10.25 acres total. Assumed half that amount for total acres disturbed from demobilization activities. Trenching operations will generate up to approximately 2,900 cubic yards total.

Construction Off-road Equipment Mitigation - Construction Off-road Equipment Mitigation - Mitigation measures: water exposed areas for dust control, and replace ground cover of disturbed areas.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1,550.00	50.00
tblConstructionPhase	NumDays	1,550.00	90.00
tblConstructionPhase	NumDays	1,550.00	60.00
tblConstructionPhase	NumDays	155.00	10.00
tblConstructionPhase	NumDays	60.00	30.00
tblConstructionPhase	NumDays	60.00	40.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	9/25/2018	7/30/2018
tblConstructionPhase	PhaseEndDate	9/12/2018	7/28/2018
tblConstructionPhase	PhaseEndDate	9/14/2018	8/31/2018
tblConstructionPhase	PhaseStartDate	2/4/2018	2/5/2018
tblConstructionPhase	PhaseStartDate	7/18/2018	5/22/2018
tblConstructionPhase	PhaseStartDate	9/1/2018	7/18/2018
tblConstructionPhase	PhaseStartDate	7/31/2018	7/17/2018
tblGrading	AcresOfGrading	22.50	29.50
tblGrading	AcresOfGrading	17.50	29.50
tblLandUse	LotAcreage	0.00	98.33
tblOffRoadEquipment	OffRoadEquipmentType		Dumpers/Tenders
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	12.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	9.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	11.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Direct Bury Construction and Pole Installation
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Direct Bury Construction and Pole Installation
tblOffRoadEquipment	PhaseName		Trenching for Installation of Underground Cables
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation
tblOffRoadEquipment	PhaseName		Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation
tblOffRoadEquipment	PhaseName		Demobilization/Clean Up/Road Refreshing
tblOffRoadEquipment	PhaseName		Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Direct Bury Construction and Pole Installation
tblOffRoadEquipment	PhaseName		Stringing Activities/Transfer Conductor/Sagging Activities
tblOffRoadEquipment	PhaseName		Demobilization/Clean Up/Road Refreshing

tblOffRoadEquipment	PhaseName	Trenching for Installation of Underground Cables
tblOffRoadEquipment	PhaseName	Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation

tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	PhaseName		Pier Foundation and Micropile Construction
tblOffRoadEquipment	UsageHours	7.00	5.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripLength	20.00	74.00
tblTripsAndVMT	HaulingTripNumber	0.00	363.00
tblTripsAndVMT	VendorTripLength	7.30	69.00
tblTripsAndVMT	VendorTripLength	7.30	69.00
tblTripsAndVMT	VendorTripLength	7.30	69.00
tblTripsAndVMT	VendorTripLength	7.30	69.00
tblTripsAndVMT	VendorTripLength	7.30	69.00
tblTripsAndVMT	VendorTripLength	7.30	69.00
tblTripsAndVMT	VendorTripLength	7.30	69.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	24.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	23.00	14.00
tblTripsAndVMT	WorkerTripNumber	0.00	12.00
tblTripsAndVMT	WorkerTripNumber	0.00	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	24.00

tblTripsAndVMT	WorkerTripNumber	10.00	14.00
tblTripsAndVMT	WorkerTripNumber	20.00	16.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.6994	7.7683	4.1935	0.0144	0.1715	0.2859	0.4574	0.0426	0.2646	0.3073	0.0000	1,289.0266	1,289.0266	0.2862	0.0000	1,295.0377
Total	0.6994	7.7683	4.1935	0.0144	0.1715	0.2859	0.4574	0.0426	0.2646	0.3073	0.0000	1,289.0266	1,289.0266	0.2862	0.0000	1,295.0377

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.6994	7.7286	4.1935	0.0144	0.1473	0.2859	0.4332	0.0400	0.2646	0.3046	0.0000	1,289.0255	1,289.0255	0.2862	0.0000	1,295.0366
Total	0.6994	7.7286	4.1935	0.0144	0.1473	0.2859	0.4332	0.0400	0.2646	0.3046	0.0000	1,289.0255	1,289.0255	0.2862	0.0000	1,295.0366

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Site Preparation	1/1/2018	2/3/2018	6	30	
2	Pier Foundation and Micropile Construction	Building Construction	2/5/2018	4/3/2018	6	50	
3	Direct Bury Construction and Pole Installation	Building Construction	4/4/2018	7/17/2018	6	90	
4	Stringing Activities/Transfer Conductor/Sagging Activities	Building Construction	5/22/2018	7/30/2018	6	60	
5	Demobilization/Clean Up/Road Refreshing	Site Preparation	7/17/2018	8/31/2018	6	40	
6	Trenching for Installation of Underground Cables	Grading	7/18/2018	7/28/2018	6	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Dumpers/Tenders	1	3.00	16	0.38
Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Graders	2	6.00	174	0.41
Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Off-Highway Trucks	4	3.00	400	0.38
Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation	Other Construction Equipment	2	7.00	171	0.42
Pier Foundation and Micropile Construction	Air Compressors	3	5.00	78	0.48
Pier Foundation and Micropile Construction	Bore/Drill Rigs	3	7.00	205	0.50
Pier Foundation and Micropile Construction	Cement and Mortar Mixers	1	4.00	9	0.56
Pier Foundation and Micropile Construction	Forklifts	3	4.00	89	0.20
Pier Foundation and Micropile Construction	Off-Highway Trucks	12	3.00	400	0.38
Direct Bury Construction and Pole Installation	Air Compressors	3	3.00	78	0.48
Direct Bury Construction and Pole Installation	Bore/Drill Rigs	3	7.00	205	0.50

Direct Bury Construction and Pole Installation	Cranes	3	5.00	226	0.29
Direct Bury Construction and Pole Installation	Off-Highway Trucks	9	4.00	400	0.38
Stringing Activities/Transfer Conductor/Sagging Activities	Off-Highway Trucks	11	4.00	400	0.38
Demobilization/Clean Up/Road Refreshing	Graders	1	7.00	174	0.41
Demobilization/Clean Up/Road Refreshing	Off-Highway Trucks	2	6.00	400	0.38
Demobilization/Clean Up/Road Refreshing	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Trenching for Installation of Underground Cables	Bore/Drill Rigs	1	6.00	205	0.50
Trenching for Installation of Underground Cables	Off-Highway Trucks	4	3.00	400	0.38
Trenching for Installation of Underground Cables	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Pier Foundation and Micropile Construction	Dumpers/Tenders	1	4.00	16	0.38
Pier Foundation and Micropile Construction	Excavators	1	4.00	162	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
	9	14.00	2.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Pier Foundation and Micropile Construction	22	12.00	8.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Direct Bury Construction and Pole Installation	18	60.00	24.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Stringing Activities/Transfer Conductor/Sagging Activities	11	24.00	6.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Demobilization/Clean Up/Road Refreshing	4	14.00	2.00	0.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT
Trenching for Installation of Underground Cables	8	16.00	2.00	363.00	10.80	69.00	74.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Staging Yard Setup, Road Refinishing, Vegetation Trimming, BMP Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0156	0.0000	0.0156	1.6900e-003	0.0000	1.6900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0510	0.5341	0.3090	6.0000e-004		0.0257	0.0257		0.0237	0.0237	0.0000	54.8092	54.8092	0.0170	0.0000	55.1662
Total	0.0510	0.5341	0.3090	6.0000e-004	0.0156	0.0257	0.0414	1.6900e-003	0.0237	0.0254	0.0000	54.8092	54.8092	0.0170	0.0000	55.1662

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1100e-003	0.0176	8.6500e-003	6.0000e-005	1.8400e-003	3.2000e-004	2.1500e-003	5.3000e-004	2.9000e-004	8.2000e-004	0.0000	5.5277	5.5277	4.0000e-005	0.0000	5.5284
Worker	5.9000e-004	7.9000e-004	7.4000e-003	2.0000e-005	1.6800e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.4521	1.4521	7.0000e-005	0.0000	1.4536
Total	1.7000e-003	0.0184	0.0161	8.0000e-005	3.5200e-003	3.3000e-004	3.8500e-003	9.8000e-004	3.0000e-004	1.2800e-003	0.0000	6.9797	6.9797	1.1000e-004	0.0000	6.9820

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.5200e-003	0.0000	3.5200e-003	3.8000e-004	0.0000	3.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0510	0.5341	0.3090	6.0000e-004		0.0257	0.0257		0.0237	0.0237	0.0000	54.8092	54.8092	0.0170	0.0000	55.1662
Total	0.0510	0.5341	0.3090	6.0000e-004	3.5200e-003	0.0257	0.0293	3.8000e-004	0.0237	0.0241	0.0000	54.8092	54.8092	0.0170	0.0000	55.1662

Mitigated Construction Off-Site

Vendor	7.4300e-003	0.1172	0.0577	4.2000e-004	0.0123	2.1100e-003	0.0144	3.5000e-003	1.9400e-003	5.4400e-003	0.0000	36.8511	36.8511	2.4000e-004	0.0000	36.8561
Worker	8.5000e-004	1.1300e-003	0.0106	3.0000e-005	2.4100e-003	2.0000e-005	2.4200e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.0744	2.0744	1.0000e-004	0.0000	2.0765
Total	8.2800e-003	0.1183	0.0682	4.5000e-004	0.0147	2.1300e-003	0.0168	4.1400e-003	1.9600e-003	6.1000e-003	0.0000	38.9254	38.9254	3.4000e-004	0.0000	38.9326

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1356	1.3822	0.8079	2.3800e-003		0.0577	0.0577		0.0539	0.0539	0.0000	215.6685	215.6685	0.0634	0.0000	217.0005
Total	0.1356	1.3822	0.8079	2.3800e-003		0.0577	0.0577		0.0539	0.0539	0.0000	215.6685	215.6685	0.0634	0.0000	217.0005

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.4300e-003	0.1172	0.0577	4.2000e-004	0.0123	2.1100e-003	0.0144	3.5000e-003	1.9400e-003	5.4400e-003	0.0000	36.8511	36.8511	2.4000e-004	0.0000	36.8561
Worker	8.5000e-004	1.1300e-003	0.0106	3.0000e-005	2.4100e-003	2.0000e-005	2.4200e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.0744	2.0744	1.0000e-004	0.0000	2.0765
Total	8.2800e-003	0.1183	0.0682	4.5000e-004	0.0147	2.1300e-003	0.0168	4.1400e-003	1.9600e-003	6.1000e-003	0.0000	38.9254	38.9254	3.4000e-004	0.0000	38.9326

3.4 Direct Bury Construction and Pole Installation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2561	2.8356	1.4091	4.3700e-003		0.1088	0.1088		0.1009	0.1009	0.0000	397.6270	397.6270	0.1201	0.0000	400.1482
Total	0.2561	2.8356	1.4091	4.3700e-003		0.1088	0.1088		0.1009	0.1009	0.0000	397.6270	397.6270	0.1201	0.0000	400.1482

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0401	0.6328	0.3114	2.2500e-003	0.0662	0.0114	0.0776	0.0189	0.0105	0.0294	0.0000	198.9957	198.9957	1.2900e-003	0.0000	199.0229
Worker	7.6300e-003	0.0101	0.0951	2.7000e-004	0.0217	1.6000e-004	0.0218	5.7500e-003	1.5000e-004	5.9000e-003	0.0000	18.6694	18.6694	9.2000e-004	0.0000	18.6886
Total	0.0477	0.6430	0.4065	2.5200e-003	0.0878	0.0115	0.0994	0.0247	0.0106	0.0353	0.0000	217.6651	217.6651	2.2100e-003	0.0000	217.7115

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2561	2.8356	1.4091	4.3700e-003		0.1088	0.1088		0.1009	0.1009	0.0000	397.6265	397.6265	0.1201	0.0000	400.1477
Total	0.2561	2.8356	1.4091	4.3700e-003		0.1088	0.1088		0.1009	0.1009	0.0000	397.6265	397.6265	0.1201	0.0000	400.1477

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0401	0.6328	0.3114	2.2500e-003	0.0662	0.0114	0.0776	0.0189	0.0105	0.0294	0.0000	198.9957	198.9957	1.2900e-003	0.0000	199.0229
Worker	7.6300e-003	0.0101	0.0951	2.7000e-004	0.0217	1.6000e-004	0.0218	5.7500e-003	1.5000e-004	5.9000e-003	0.0000	18.6694	18.6694	9.2000e-004	0.0000	18.6886
Total	0.0477	0.6430	0.4065	2.5200e-003	0.0878	0.0115	0.0994	0.0247	0.0106	0.0353	0.0000	217.6651	217.6651	2.2100e-003	0.0000	217.7115

3.5 Stringing Activities/Transfer Conductor/Sagging Activities - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1270	1.3668	0.6898	2.1700e-003		0.0499	0.0499		0.0459	0.0459	0.0000	198.0341	198.0341	0.0617	0.0000	199.3287
Total	0.1270	1.3668	0.6898	2.1700e-003		0.0499	0.0499		0.0459	0.0459	0.0000	198.0341	198.0341	0.0617	0.0000	199.3287

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6900e-003	0.1055	0.0519	3.7000e-004	0.0110	1.9000e-003	0.0129	3.1500e-003	1.7400e-003	4.9000e-003	0.0000	33.1660	33.1660	2.2000e-004	0.0000	33.1705
Worker	2.0300e-003	2.7100e-003	0.0254	7.0000e-005	5.7700e-003	4.0000e-005	5.8200e-003	1.5300e-003	4.0000e-005	1.5700e-003	0.0000	4.9785	4.9785	2.4000e-004	0.0000	4.9836
Total	8.7200e-003	0.1082	0.0773	4.4000e-004	0.0168	1.9400e-003	0.0188	4.6800e-003	1.7800e-003	6.4700e-003	0.0000	38.1445	38.1445	4.6000e-004	0.0000	38.1541

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1270	1.3668	0.6898	2.1700e-003		0.0499	0.0499		0.0459	0.0459	0.0000	198.0338	198.0338	0.0617	0.0000	199.3285
Total	0.1270	1.3668	0.6898	2.1700e-003		0.0499	0.0499		0.0459	0.0459	0.0000	198.0338	198.0338	0.0617	0.0000	199.3285

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6900e-003	0.1055	0.0519	3.7000e-004	0.0110	1.9000e-003	0.0129	3.1500e-003	1.7400e-003	4.9000e-003	0.0000	33.1660	33.1660	2.2000e-004	0.0000	33.1705
Worker	2.0300e-003	2.7100e-003	0.0254	7.0000e-005	5.7700e-003	4.0000e-005	5.8200e-003	1.5300e-003	4.0000e-005	1.5700e-003	0.0000	4.9785	4.9785	2.4000e-004	0.0000	4.9836
Total	8.7200e-003	0.1082	0.0773	4.4000e-004	0.0168	1.9400e-003	0.0188	4.6800e-003	1.7800e-003	6.4700e-003	0.0000	38.1445	38.1445	4.6000e-004	0.0000	38.1541

3.6 Demobilization/Clean Up/Road Refreshing - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0156	0.0000	0.0156	1.6900e-003	0.0000	1.6900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0416	0.4334	0.2422	5.5000e-004		0.0200	0.0200		0.0184	0.0184	0.0000	50.1976	50.1976	0.0156	0.0000	50.5258
Total	0.0416	0.4334	0.2422	5.5000e-004	0.0156	0.0200	0.0357	1.6900e-003	0.0184	0.0201	0.0000	50.1976	50.1976	0.0156	0.0000	50.5258

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4900e-003	0.0234	0.0115	8.0000e-005	2.4500e-003	4.2000e-004	2.8700e-003	7.0000e-004	3.9000e-004	1.0900e-003	0.0000	7.3702	7.3702	5.0000e-005	0.0000	7.3712
Worker	7.9000e-004	1.0500e-003	9.8600e-003	3.0000e-005	2.2500e-003	2.0000e-005	2.2600e-003	6.0000e-004	2.0000e-005	6.1000e-004	0.0000	1.9361	1.9361	1.0000e-004	0.0000	1.9381
Total	2.2800e-003	0.0245	0.0214	1.1000e-004	4.7000e-003	4.4000e-004	5.1300e-003	1.3000e-003	4.1000e-004	1.7000e-003	0.0000	9.3063	9.3063	1.5000e-004	0.0000	9.3093

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.5200e-003	0.0000	3.5200e-003	3.8000e-004	0.0000	3.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0416	0.4334	0.2422	5.5000e-004		0.0200	0.0200		0.0184	0.0184	0.0000	50.1975	50.1975	0.0156	0.0000	50.5257
Total	0.0416	0.4334	0.2422	5.5000e-004	3.5200e-003	0.0200	0.0236	3.8000e-004	0.0184	0.0188	0.0000	50.1975	50.1975	0.0156	0.0000	50.5257

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4900e-003	0.0234	0.0115	8.0000e-005	2.4500e-003	4.2000e-004	2.8700e-003	7.0000e-004	3.9000e-004	1.0900e-003	0.0000	7.3702	7.3702	6.0000e-005	0.0000	7.3712
Worker	7.9000e-004	1.0500e-003	9.8600e-003	3.0000e-005	2.2500e-003	2.0000e-005	2.2600e-003	6.0000e-004	2.0000e-005	6.1000e-004	0.0000	1.9361	1.9361	1.0000e-004	0.0000	1.9381
Total	2.2800e-003	0.0245	0.0214	1.1000e-004	4.7000e-003	4.4000e-004	5.1300e-003	1.3000e-003	4.1000e-004	1.7000e-003	0.0000	9.3063	9.3063	1.5000e-004	0.0000	9.3093

3.7 Trenching for Installation of Underground Cables - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.1112	0.0693	1.7000e-004		5.1300e-003	5.1300e-003		4.7200e-003	4.7200e-003	0.0000	15.7058	15.7058	4.8900e-003	0.0000	15.8084
Total	0.0103	0.1112	0.0693	1.7000e-004	0.0000	5.1300e-003	5.1300e-003	0.0000	4.7200e-003	4.7200e-003	0.0000	15.7058	15.7058	4.8900e-003	0.0000	15.8084

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.5000e-003	0.1468	0.0710	4.9000e-004	0.0115	2.2100e-003	0.0137	3.1400e-003	2.0300e-003	5.1700e-003	0.0000	43.5676	43.5676	2.9000e-004	0.0000	43.5736
Vendor	3.7000e-004	5.8600e-003	2.8800e-003	2.0000e-005	6.1000e-004	1.1000e-004	7.2000e-004	1.8000e-004	1.0000e-004	2.7000e-004	0.0000	1.8426	1.8426	1.0000e-005	0.0000	1.8428
Worker	2.3000e-004	3.0000e-004	2.8200e-003	1.0000e-005	6.4000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5532	0.5532	3.0000e-005	0.0000	0.5537
Total	9.1000e-003	0.1529	0.0767	5.2000e-004	0.0127	2.3200e-003	0.0150	3.4900e-003	2.1300e-003	5.6100e-003	0.0000	45.9633	45.9633	3.3000e-004	0.0000	45.9702

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.1112	0.0693	1.7000e-004		5.1300e-003	5.1300e-003		4.7200e-003	4.7200e-003	0.0000	15.7057	15.7057	4.8900e-003	0.0000	15.8084
Total	0.0103	0.1112	0.0693	1.7000e-004	0.0000	5.1300e-003	5.1300e-003	0.0000	4.7200e-003	4.7200e-003	0.0000	15.7057	15.7057	4.8900e-003	0.0000	15.8084

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.5000e-003	0.1468	0.0710	4.9000e-004	0.0115	2.2100e-003	0.0137	3.1400e-003	2.0300e-003	5.1700e-003	0.0000	43.5676	43.5676	2.9000e-004	0.0000	43.5736
Vendor	3.7000e-004	5.8600e-003	2.8900e-003	2.0000e-005	6.1000e-004	1.1000e-004	7.2000e-004	1.8000e-004	1.0000e-004	2.7000e-004	0.0000	1.8426	1.8426	1.0000e-005	0.0000	1.8428
Worker	2.3000e-004	3.0000e-004	2.8200e-003	1.0000e-005	6.4000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.7000e-004	0.0000	0.5532	0.5532	3.0000e-005	0.0000	0.5537
Total	9.1000e-003	0.1529	0.0767	5.2000e-004	0.0127	2.3200e-003	0.0150	3.4900e-003	2.1300e-003	5.6100e-003	0.0000	45.9633	45.9633	3.3000e-004	0.0000	45.9702

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					

Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
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Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

SDG&E Tie Line 695 Helicopter Emissions

Emissions Factors¹

Helicopter Model	Engine	Assumed Engine	Operating Mode	Fuel Flow, kg/s	Time in Mode, min	Emission Incides, g/kg fuel				Emission, lbs/mode				Cruise Mode Emission Factor, lbs/hour				
						CO	VOC	NOx	PM	CO	VOC	NOx	PM	CO	VOC	NOx	PM	
Hughes 500E	Allison 250-C20B/R	250B17B	Taxi Out	0.008154	19	2.199837	23.004097	2.199837	PM	4.2	0.045081939	0.471430067	0.045081939	0.086071898				
			Takeoff	0.031642	10.4	6.599994	0.402675	6.599994		4.2	0.287295342	0.017528297	0.287295342	0.182824475				
			Climbout	0.028926	0.09	5.981142	0.408337	5.981142		4.2	0.002059694	0.000140617	0.002059694	0.001446332	1.373129585	0.093744575	1.373129585	0.964221257
			Approach	0.010516	10.05	2.200637	5.988767	2.200637		4.2	0.03076471	0.083722432	0.03076471	0.058715628				
			Taxi In	0.008154	7	2.199837	23.004097	2.199837		4.2	0.016609136	0.173684761	0.016609136	0.031710699				
Total per LTO										0.381810821	0.746506174	0.381810821	0.360769032					

Helicopter Model	Engine	Assumed Engine	Operating Mode	Fuel Flow, kg/s	Time in Mode, min	Emission Incides, g/kg fuel				Emission, lbs/mode				Cruise Mode Emission Factor, lbs/hour				
						CO	VOC	NOx	PM	CO	VOC	NOx	PM	CO	VOC	NOx	PM	
SkyCrane	Allison 250-C20B/R	250B17B	Taxi Out	0.018353	19	175.63	99.78	1.201		4.2	8.10115881	4.602480362	0.055397664	0.193730382				
			Takeoff	0.112337	1.5	8.787	2.123	7.088		4.2	0.195858528	0.047320776	0.157988534	0.093616231				
			Climbout	0.079	1.5	14	1.32	5.58		4.2	0.219449282	0.020690932	0.087466214	0.065834785	8.777971296	0.827637294	3.498648559	2.63391389
			Approach	0.018	9.719	178.175	101.213	1.207995		4.2	4.123145244	2.342168652	0.027954196	0.097192143				
			Taxi In	0.018353	7	2.199837	23.007097	2.199837		4.2	0.037383795	0.390929167	0.037383795	0.071374351				
Total per LTO										12.67699566	7.403589889	0.366190403	0.521747892					

Notes: ¹ Fuel flow rates and emission factors are from the Federal Aviation Administration's Emission and Dispersion Modeling System (EDMS). Time in mode is based on default times in EDMS.

² PM emissions are assumed to be comprised of 90 percent PM_{2.5} and 10 percent PM₁₀.

Maximum Emissions (lbs/day) - Light-duty Helicopter Usage

Component	Number of LTOs	Hours of Cruising Time	Emissions (lbs/day)					Emissions (tons/year)				
			CO	VOC	NOx	PM ₁₀	PM _{2.5}	CO	VOC	NOx	PM ₁₀	PM _{2.5}
LTO - Light Helicopter (Hughes 500)	6		2.290864926	4.479037044	2.290864926	0.216461419	1.948152773	0.418082849	0.817424261	0.418082849	0.039504209	0.355537881
Cruising Time (Installation/Demolition) - Light Helicopter		4	5.49251834	0.3749783	5.49251834	0.385688503	3.471196525	1.002384597	0.06843354	1.002384597	0.070388152	0.633493366
Peak Estimated Helicopter Emissions			7.783383266	4.854015344	7.783383266	0.602149922	5.419349298	1.420467446	0.8858578	1.420467446	0.109892361	0.989031247

Notes: (1) Assume a 9 hour work day = 4 hrs of cruising time + 5 hrs of LTO time. Each LTO cycle requires an estimated 46.54 minutes or 0.78 hrs to complete. Therefore, each LTO cycle = 5 hrs LTO/0.78 hrs = 6 LTOs per day (maximum).

Maximum Emissions (lbs/day) - Heavy-duty Helicopter Usage

Component	Number of LTOs	Number of LTOs or hours cruising ¹	Emissions (lbs/day)					Emissions (tons/year)				
			CO	VOC	NOx	PM ₁₀	PM _{2.5}	CO	VOC	NOx	PM ₁₀	PM _{2.5}
LTO - Heavy Helicopter (SkyCrane)	6		76.06197395	44.42153933	2.197142418	0.313048735	2.817438617	13.88131025	8.106930928	0.400978491	0.057131394	0.514182548
Cruising Time (Installation/Demolition) - Heavy Helicopter		5	43.88985648	4.13818647	17.4932428	1.316695695	11.85026125	8.009898808	0.755219031	3.19251681	0.240296964	2.162672678
Peak Estimated Helicopter Emissions			119.9518304	48.5597258	19.69038521	1.62974443	14.66769987	21.89120905	8.862149959	3.593495301	0.297428358	2.676855226

Notes: (1) Assume a 9 hour work day = 5 hrs of cruising time + 4 hrs of LTO time. Each LTO cycle requires an estimated 38.72 minutes or 0.65 hrs to complete. Therefore, each LTO cycle = 4 hrs LTO/0.65 hrs = 6 LTOs per day (maximum).