

**TABLE 3  
DIBBLE CREEK WORK AROUND  
CONSTRUCTION AND OPERATION EMISSIONS SUMMARY**

Construction Engine Emissions

SOURCE	SIZE / GROSS HP	DAILY AMOUNT (hrs or trips) <sup>(1)</sup>	DAYS OF ACTIVITY	NUMBER OF UNITS	ONE-WAY DISTANCE (miles)	NO <sub>x</sub>			ROC			PM <sub>10</sub>			SO <sub>x</sub>			CO			NOTES	
						EF (g/hr) <sup>(2)</sup>	Daily (lbs/day)	Total (tons)	EF (g/hr) <sup>(2)</sup>	Daily (lbs/day)	Total (tons)	EF (g/hr) <sup>(2)</sup>	Daily (lbs/day)	Total (tons)	EF (g/hr) <sup>(2)</sup>	Daily (lbs/day)	Total (tons)	EF (g/hr) <sup>(2)</sup>	Daily (lbs/day)	Total (tons)		
<b>Surveying &amp; Potholing (10 tons)</b>																						
Backhoe Loader	78	10	2	1	-	774	17.1	0.0171	64	1.4	0.0014	13	0.29	0.0003	58	1.27	0.0013	79	1.7	0.0017	6	
Vac Truck	C6500	1	2	-	15	2.2	0.1	0.0001	0.66	0.0	0.0000	0.05	0.00	0.0000	0.3	0.02	0.0000	9.6	0.6	0.0006	7	
Surveying Lt-Heavy Duty Truck	3/4 - 1 ton	1	2	-	15	2.2	0.1	0.0001	0.66	0.0	0.0000	0.05	0.00	0.0000	0.3	0.02	0.0000	9.6	0.6	0.0006	7	
Lt-Heavy Duty Truck	3/4 - 1 ton	3	2	-	15	2.2	0.4	0.0004	0.66	0.1	0.0001	0.05	0.01	0.0000	0.3	0.06	0.0001	9.6	1.9	0.0019	7	
Worker Light Truck	Light	8	2	-	15	1.0	0.5	0.0005	0.35	0.2	0.0002	0	0.00	0.0000	0.06	0.03	0.0000	7.2	3.8	0.0038	7	
<b>Maxima and Subtotals (Surveying &amp; Potholing)</b>							18.3	0.0183		1.8	0.0018		0.31	0.0003		1.41	0.0014		8.7	0.0087	13	
<b>Boring &amp; Clearing (500 feet)</b>																						
Boring Rig (Rock)	DD6	10	4	1	-	4.2	0.1	0.0002	0.19	0.0	0.0000	0.26	0.01	0.0000	0.45	0.01	0.0000	1.8	0.0	0.0001	8	
Rig Truck & Trailer	HH Truck	1	4	-	15	11.3	0.7	0.0015	2.2	0.1	0.0003	0.6	0.04	0.0001	0.3	0.02	0.0000	14.0	0.9	0.0019	7	
Water Truck	4500 gal.	1	4	-	15	11.3	0.7	0.0015	2.2	0.1	0.0003	0.6	0.04	0.0001	0.3	0.02	0.0000	14.0	0.9	0.0019	6	
Skid Truck	3/4 - 1 ton	1	4	-	15	2.24	0.1	0.0003	0.66	0.0	0.0001	0.05	0.00	0.0000	0.31	0.02	0.0000	9.57	0.6	0.0013	7	
Dozer (D4)	D4	10	4	1	-	977	21.5	0.0431	69	1.5	0.0030	11	0.25	0.0005	72	1.58	0.0032	77	1.7	0.0034	6	
Dozer (D6)	D6	10	4	1	-	1660	36.6	0.0732	110	2.4	0.0049	15	0.33	0.0007	105	2.31	0.0046	110	2.4	0.0049	6	
Backhoe Loader	416C	10	4	1	-	774	17.1	0.0341	64	1.4	0.0028	13	0.29	0.0006	58	1.27	0.0025	79	1.7	0.0035	6	
Flatbed	3/4 ton	2	4	-	15	2.2	0.3	0.0006	0.66	0.1	0.0002	0.05	0.01	0.0000	0.31	0.04	0.0001	9.57	1.3	0.0025	7	
Lt-Heavy Duty Truck	3/4 - 1 ton	7	12	-	15	2.2	1.0	0.0062	0.66	0.3	0.0018	0.05	0.02	0.0001	0.31	0.14	0.0009	9.57	4.4	0.0266	7	
Worker Light Truck	Light	12	4	-	15	1.0	0.8	0.0016	0.4	0.3	0.0006	0	0.00	0.0000	0.06	0.05	0.0001	7.2	5.7	0.0115	7	
<b>Subtotals (Boring &amp; Clearing)</b>							79.0	0.1622		6.4	0.0140		0.99	0.0021		5.48	0.0115		19.8	0.0573	13	
<b>Trenching (1,100 feet)</b>																						
Backhoe Loader	78	10	3	1	-	774	17.1	0.0256	64	1.4	0.0021	13	0.29	0.0004	58	1.27	0.0019	79	1.7	0.0026	6	
Dozer (D4)	D4	8	3	1	-	977	17.2	0.0258	69	1.2	0.0018	11	0.19	0.0003	72	1.27	0.0019	77	1.4	0.0020	6	
Ag. Tractor	225	10	3	1	-	1238	27.3	0.0409	75	1.7	0.0025	9.0	0.20	0.0003	90	1.98	0.0030	75	1.7	0.0025	6	
Water Truck	132	10	3	1	-	1310	28.9	0.0433	40	0.9	0.0013	50	1.10	0.0017	125	2.76	0.0041	170	3.7	0.0056	8	
Lt-Heavy Duty Truck	3/4 - 1 ton	1	3	-	15	2.24	0.1	0.0002	0.66	0.0	0.0001	0.05	0.00	0.0000	0.31	0.02	0.0000	9.57	0.6	0.0009	7	
Worker Light Truck	Light	10	3	-	15	1.0	0.7	0.0010	0.35	0.2	0.0003	0	0.00	0.0000	0.06	0.04	0.0001	7.22	4.8	0.0072	7	
<b>Maxima and Subtotals (Trenching)</b>							91.3	0.1369		5.4	0.0082		1.79	0.0027		7.34	0.0110		13.9	0.0208		
<b>Proofing (10 tons)</b>																						
Backhoe Loader	78	10	1	1	-	774	17.1	0.0085	64	1.4	0.0007	13	0.29	0.0001	58	1.27	0.0006	79	1.7	0.0009	6	
Lt-Heavy Duty Truck	3/4 - 1 ton	2	1	-	15	11	1.5	0.0007	2.2	0.3	0.0001	0.6	0.08	0.0000	0.3	0.04	0.0000	14	1.9	0.0009	7	
Worker Light Truck	Light	3	1	-	15	1.0	0.2	0.0001	0.35	0.1	0.0000	0	0.00	0.0000	0.06	0.01	0.0000	7.2	1.4	0.0007	7	
<b>Maxima and Subtotals (Proofing)</b>							18.7	0.0094		1.8	0.0009		0.37	0.0002		1.33	0.0007		5.0	0.0025	13	
<b>Cable Installation &amp; Splicing (10 tons)</b>																						
Backhoe Loader	78	10	1	1	-	774	17.1	0.0085	64	1.4	0.0007	13	0.29	0.0001	58	1.27	0.0006	79	1.7	0.0009	6	
Flatbed	3/4 ton	1	1	-	15	2.2	0.1	0.0001	0.7	0.0	0.0000	0.05	0.00	0.0000	0.31	0.02	0.0000	9.6	0.6	0.0003	7	
Lt-Heavy Duty Truck	3/4 - 1 ton	2	1	-	15	2.2	0.3	0.0001	0.7	0.1	0.0000	0.05	0.01	0.0000	0.31	0.04	0.0000	9.6	1.3	0.0006	7	
Worker Light Truck	Light	5	1	-	15	1.0	0.3	0.0002	0.35	0.1	0.0001	0	0.00	0.0000	0.06	0.02	0.0000	7.2	2.4	0.0012	7	
<b>Maxima and Subtotals (Cable &amp; Splicing)</b>							17.8	0.0089		1.7	0.0008		0.30	0.0002		1.35	0.0007		6.0	0.0030	13	
<b>Handholes (12 tons)</b>																						
Backhoe Loader	78	10	1	1	-	774	17.1	0.0085	64	1.4	0.0007	13	0.29	0.0001	58	1.27	0.0006	79	1.7	0.0009	6	
Flatbed	3/4 ton	1	1	-	15	2.2	0.1	0.0001	0.7	0.0	0.0000	0.05	0.00	0.0000	0.31	0.02	0.0000	9.6	0.6	0.0003	7	
Lt-Heavy Duty Truck	3/4 - 1 ton	2	1	-	15	2.2	0.3	0.0001	0.7	0.1	0.0000	0.05	0.01	0.0000	0.31	0.04	0.0000	9.6	1.3	0.0006	7	
Worker Light Truck	Light	4	1	-	15	1.0	0.3	0.0001	0.35	0.1	0.0000	0	0.00	0.0000	0.06	0.02	0.0000	7.2	1.9	0.0010	7	
<b>Maxima and Subtotals (Handholes)</b>							17.8	0.0089		1.6	0.0008		0.30	0.0002		1.35	0.0007		5.5	0.0028	13	
<b>Markers</b>																						
Flatbed	3/4 ton	1	1	-	15	2.2	0.1	0.0001	0.7	0.0	0.0000	0.05	0.00	0.0000	0.3	0.02	0.0000	9.6	0.6	0.0003	7	
Worker Light Truck	Light	2	1	-	15	1.0	0.1	0.0001	0.4	0.0	0.0000	0	0.00	0.0000	0.06	0.01	0.0000	7.2	1.0	0.0005	7	
<b>Maxima and Subtotals (Markers)</b>							0.3	0.0001		0.1	0.0000		0.00	0.0000		0.03	0.0000		1.6	0.0008	13	
<b>Restoration</b>																						
Ag. Tractor	225	10	1	1	-	2370	52.2	0.0261	180	4.0	0.0020	15	0.33	0.0002	135	2.98	0.0015	205	4.5	0.0023	6	
Dozer (D6)	153	10	1	1	-	1660	36.6	0.0183	110	2.4	0.0012	15	0.33	0.0002	105	2.31	0.0012	110	2.4	0.0012	6	
Water Truck	1,000 gal.	10	1	1	-	1310	28.9	0.0144	40	0.9	0.0004	50	1.10	0.0006	125	2.76	0.0014	170	3.7	0.0019	6	
Lt-Heavy Duty Truck	3/4 - 1 ton	2	1	-	15	11.3	1.5	0.0007	2.2	0.3	0.0001	0.6	0.08	0.0000	0.3	0.04	0.0000	14.0	1.9	0.0009	7	
Worker Light Truck	Light	6	1	-	15	1.0	0.4	0.0002	0.4	0.1	0.0001	0	0.00	0.0000	0.1	0.02	0.0000	7.2	2.9	0.0014	7	
<b>Maxima and Subtotals (Restoration)</b>							119.6	0.0598		7.7	0.0039		1.84	0.0009		8.11	0.0041		15.4	0.0077	13	
<b>Maxima and Subtotals, Construction Engine Emissions <sup>(3)</sup></b>							119.6	0.4046		7.7	0.0304		1.84	0.0065		8.11	0.0300		19.8	0.1037	14	
<b>Total Construction Emissions (Fugitive plus exhaust)</b>								0.4046				0.0304		31.05	0.2168			0.0300			0.1037	15
<b>Construction Thresholds</b>							N/A	N/A		N/A	N/A		N/A	N/A		N/A	N/A		N/A	N/A		
<b>Insignificant Impact <sup>(9)</sup></b>							N/A	N/A		N/A	N/A		N/A	N/A		N/A	N/A		N/A	N/A		

(Continued)

Construction Fugitive Dust Emissions

SOURCE	DAILY AMOUNT (hours)	DAYS OF ACTIVITY	AREA OF GRADING / TRENCHING	PM10 EMISSIONS			NOTES
				EF	(daily lbs)	(total tons)	
General Construction Activities	10	14	0.73 acres	39.4 lb/acre-day	29.0	0.2027	10
Trenching - Cable Installation	10	3	--	0.51 lb/hr	5.1	0.0076	
Wind Erosion	24	3	0.04 acres	6.60 lb/acre-day	0.2	0.0004	11
<b>Subtotal, Construction Fugitive Emissions</b> <sup>(5)</sup>					29.2	0.2103	
<b>Total PM10 Construction Emissions (Engine Exhaust and Fugitive)</b> <sup>(5)</sup>						0.2168	

'- = Not applicable

Unit abbreviations: g/hr = grams per hour, lb/day = pounds per day, tpy = tons per year, tpq = tons per quarter

(1) Daily amount is measured in hours for off-road construction equipment (e.g., backhoe), and in number of trips for on-road vehicles (e.g., worker light-truck).

(2) Emission factors are in grams per hour for off-road equipment, and in grams per mile for on-road vehicles.

(3) Construction emission subtotals are for the complete project. Major pieces of construction off-road equipment (e.g., backhoe, dozer) are used consecutively, not concurrently.

(4) Workarounds have no equipment operating after construction (trenching for long-haul fiber optic cable).

(5) Dozer will work only 8 hours per day to keep it's NOx daily emission rate below the level of significance (55 lbs/day).

(6) Emission factors are from Caterpillar Corp.

(7) MVEI7G Emission Factors (1998, 15mph, 75°F)

(8) SCAQMD CEQA Handbook, Tables A9-8-A & A9-8-B

(9) Construction emissions have insignificant impact when no emission of a major piece of off-road equipment exceeds threshold (i.e., major pieces are used sequentially, not concurrently).

(10) Area subjected to general construction activity is 1,200-foot length of workaround times 20-foot width. Period of time equals sum of days for all construction activities.

(11) Wind erosion applies to days for plowing/trenching fiber optic cable along full length of workaround.

(12) Construction fugitive PM10 emissions have an insignificant impact because no numerical regulatory limits apply.

(13) Off-site emissions plus highest daily emissions from a single piece of onsite equipment. Onsite equipment does not operate simultaneously.

(14) Different stages of construction (e.g., trenching and proofing) do not occur simultaneously.