

**TABLE 3  
PALO CEDRO ILA  
CONSTRUCTION AND OPERATION EMISSIONS SUMMARY**

Construction Engine Emissions

SOURCE	SIZE / GROSS HP	DAILY AMOUNT (1) (hrs or trips)	NUMBER OF DAYS	NUMBER OF UNITS	ONE-WAY DISTANCE (miles)	NO <sub>x</sub>			ROC			
						EF (2)	Daily (lbs/day)	Total (tons)	EF (2)	Daily (lbs/day)	Total (tons)	EF (2)
<b>Pad Construction (11cy)</b>												
Cement Truck	10 yd3	2	1	-	30	11.3	3.0	0.0015	2.2	0.6	0.0003	0.59
Gravel Truck	10 yd3	2	1	-	30	11.3	3.0	0.0015	2.2	0.6	0.0003	0.59
Worker Light Truck	Light	2	3	-	30	1.00	0.3	0.0004	0.35	0.1	0.0001	0
<b>Maxima and Subtotals (Pad Construction)</b>							6.2	0.0034		1.26	0.00072	
<b>Trenching &amp; Utility Installation (350cy)</b>												
Excavator	84	8	10	1	-	774	14	0.068	64	1.1	0.006	13
Equipment Delivery Truck	Low boy	1	2	-	30	11.3	1.5	0.001	2.2	0.3	0.000	0.59
Worker Light Truck	Light	2	10	-	30	1.00	0.3	0.001	0.35	0.1	0.000	0
<b>Maxima and Subtotals (Trenching and Utility Installation)</b>							14	0.071		1.1	0.0064	
<b>Shelter Placement</b>												
Crane	150 ton	4	1	1	-	576	5	0.003	82	0.7	0.000	64
Equipment Delivery Truck	Low boy	1	1	-	150	11.3	7.4	0.004	2.2	1.5	0.001	0.59
Worker Light Truck	Light	4	1	-	30	1.00	0.5	0.000	0.35	0.2	0.000	0
<b>Maxima and Subtotals (Shelter Placement)</b>							13.0	0.0065		2.4	0.0012	
<b>General Construction Activities</b>												
Compactor	<25 hp	6	10	1	-	8	0.11	0.0005	227	3.0	0.015	1.4
Equipment Delivery Truck	Low boy	1	2	-	30	11.3	1.5	0.0015	2.2	0.3	0.0003	0.59
Construction Generator	<50 hp	8	10	1	-	0.02	0.0003	0.000002	0.002	0.00004	0.0000002	0.001
Water Truck	4500 gal.	1	2	-	30	11.3	1.5	0.001	2.2	0.29	0.0003	0.59
Worker Light Truck	Light	1	14	-	30	1.0	0.13	0.001	0.35	0.05	0.0003	0
<b>Maxima and Subtotals (General Construction)</b>							3.2	0.0045		3.6	0.016	
<b>Maxima and Subtotals, Construction Engine Emissions <sup>(3)</sup></b>							14	0.085		3.6	0.024	
<b>Total Construction Emissions (Fugitive plus exhaust)</b>								0.085			0.024	
<b>Construction Thresholds</b>							--			--		
<b>Insignificant Impact <sup>(9)</sup></b>							Yes			Yes		

Construction Fugitive Dust Emissions

SOURCE	DAILY AMOUNT (hours)	DAYS OF ACTIVITY	AREA OF GRADING / TRENCHING	PM <sub>10</sub> EMISSIONS			NOTES
				EF	(daily lbs)	(total tons)	
				Demolition	8	0	
Access Road Use	8	17	0.23 acres	39.4 lb/acre-day	9.1	0.077	13
Trenching - Cable Installation	8	10	-	0.51 lb/hr	4.1	0.020	
Wind Erosion	24	10	0.02 acres	6.6 lb/acre-day	0.2	0.001	11
<b>Subtotal, Construction Fugitive Emissions <sup>(3)</sup></b>					9	0.10	15
<b>Total PM10 Construction Emissions (Engine Exhaust and Fugitive) <sup>(3)</sup></b>						0.10	

(Continued)

Operation Emissions <sup>(4)</sup>

SOURCE	SIZE / GROSS HP	DAILY AMOUNT (hours)	DAYS OF ACTIVITY	NUMBER OF UNITS	ONE-WAY DISTANCE (miles)	NO <sub>x</sub>			ROC			
						EF	Daily	Annual	EF	Daily	Annual	EF
						(g/hr) <sup>(2)</sup>	(lbs/day)	(tons/year)	(g/hr) <sup>(2)</sup>	(lbs/day)	(tons/year)	(g/hr) <sup>(2)</sup>
Emergency Generator	337 (300 KW)	0.5	60	1		2,325	2.56	0.08	337	0.37	0.011	135
Worker Light Truck	Light	-	60	1	30	1.0	0.13	0.004	0.35	0.05	0.001	0
<b>Total Operation Emissions <sup>(5)</sup></b>							2.70	0.08		0.42	0.013	
<b>Operation Thresholds</b>						Exempt			Exempt			
<b>Insignificant Impact <sup>(10)</sup></b>						Yes			Yes			

- = 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., grader), 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 engine emission subtotals are for the complete project. Major pieces of construction off-road equipment (e.g., grader, dozer) are used consecutively, not concurrently.
- (4) Operation and construction will not occur simultaneously, and hence, the emissions are not additive.
- (5) Operational emission totals are for the project. Only one generator will be tested on a single day.
- (6) Emission factors are from Caterpillar Corp.
- (7) EMFAC7G Emission Factors (1998, 15mph, 75°F)
- (8) SCAQMD CEQA Handbook, Table 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 consequently, not concurrently).
- (10) Operation emissions have an insignificant impact if emergency generators are exempt from regulatory limits or if no regulations apply.
- (11) Number of days subject to wind erosion equal to days for trenching.
- (12) Demolition related fugitive dust emissions are based on area of existing buildings.
- (13) Access road conservatively assumed to be 1000 ft long and 10 ft wide.
- (14) The 25-minute test cycle will be conducted mostly at 50 percent load. To be conservative, the emissions are calculated at 75 percent load.
- (15) Daily construction fugitive emissions includes the specific activity plus wind erosion.

PM <sub>10</sub>		SO <sub>x</sub>			CO			NOTES
Daily (lbs/day)	Total (tons)	EF (2)	Daily (lbs/day)	Total (tons)	EF (2)	Daily (lbs/day)	Total (tons)	
0.2	0.0001	0.31	0.1	0.0000	14.0	3.7	0.0019	7
0.2	0.0001	0.31	0.1	0.0000	14.0	3.7	0.0019	7
0	0	0.06	0.02	0.00002	7.22	1.9	0.0029	7
0.31	0.00016		0.18	0.00011		9.3	0.0066	
0.2	0.001	58	1.0	0.005	79	1.4	0.007	6
0.1	0.0001	0.31	0.04	0.00004	14.0	1.9	0.002	7
0	0	0.06	0.02	0.00008	7.2	1.9	0.010	7
0.23	0.0013		1.0	0.0052		1.9	0.018	
0.6	0.0003	41	0.4	0.0002	1624	14	0.007	8
0.4	0.0002	0.31	0.2	0.0001	14.0	9.3	0.005	7
0	0	0.06	0.03	0.00002	7.2	3.8	0.0019	7
0.95	0.00048		0.60	0.00030		27	0.014	
0.02	0.0001	0	0	0	6350	84	0.420	8
0.1	0.0001	0.31	0.04	0.00004	14.0	1.9	0.002	7
0.00002	0.0000001	0.002	0.00004	0.0000002	0.01	0.0002	0.000001	8
0.08	0.0001	0.31	0.04	0.00004	14.0	1.9	0.002	6
0	0	0.06	0.008	0.00006	7.2	1.0	0.007	7
0.174	0.00025		0.090	0.00014		89	0.43	
0.95	0.0021		1.0	0.0058		89	0.47	
10	0.10			0.0058			0.47	
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Yes			Yes			Yes		

PM <sub>10</sub>		SO <sub>x</sub>			CO			NOTES
Daily	Annual	EF	Daily	Annual	EF	Daily	Annual	
(lbs/day)	(tons/year)	(g/hr) <sup>(2)</sup>	(lbs/day)	(tons/year)	(g/hr) <sup>(2)</sup>	(lbs/day)	(tons/year)	
0.15	0.004	313	0.35	0.010	2,865	3.2	0.09	6,14
0	0	0.06	0.01	0.0002	7.2	0.96	0.03	7
0.15	0.004		0.35	0.011		4.1	0.12	
Exempt		Exempt			Exempt			
Yes			Yes			Yes		