

TABLE 3

CONSTRUCTION AND OPERATION EMISSIONS SUMMARY FOR THE EI CENTRO ILA SITE

Construction Engine Emissions

SOURCE	SIZE / GROSS HP	DAILY AMOUNT (1) (hrs or trips)	NUMBER OF DAYS	NUMBER OF UNITS	ONE-WAY DISTANCE (miles)	NO _x			ROG			PM ₁₀			SO _x			CO			NOTES	
						EF (2)	Daily (lbs/day)	Total (tons)	EF (2)	Daily (lbs/day)	Total (tons)	EF (2)	Daily (lbs/day)	Total (tons)	EF (2)	Daily (lbs/day)	Total (tons)	EF (2)	Daily (lbs/day)	Total (tons)		
Pad Construction (11cy)																						
Cement Truck	10 yd3	1	1	-	30	11.3	1.5	0.0007	2.2	0.3	0.0001	0.59	0.08	0.0000	0.31	0.04	0.0000	14.0	1.9	0.0009	7	
Gravel Truck	10 yd3	1	1	-	30	11.3	1.5	0.0007	2.2	0.3	0.0001	0.59	0.08	0.0000	0.31	0.04	0.0000	14.0	1.9	0.0009	7	
Worker Light Truck	Light	2	1	-	30	1.00	0.3	0.0001	0.35	0.1	0.0000	0	0.00	0.0000	0.06	0.02	0.0000	7.22	1.9	0.0010	7	
Maxima and Subtotals (Pad Construction)							3.2	0.0016		0.7	0.0003		0.16	0.0001		0.10	0.0000		5.6	0.0028		
Trenching & Utility Installation (97 cy)																						
Excavator	84	8	12	1	-	774	13.6	0.0819	64	1.1	0.0068	13	0.23	0.0014	58	1.02	0.0061	79	1.4	0.0083	6	
Equipment Delivery Truck	Low boy	1	2	-	30	11.3	1.5	0.0015	2.2	0.3	0.0003	0.59	0.08	0.0001	0.31	0.04	0.0000	14.0	1.9	0.0019	7	
Lt-Heavy Duty Truck	10 yd3	5	2	-	30	11.3	7.4	0.0074	2.2	1.5	0.0015	0.59	0.39	0.0004	0.31	0.21	0.0002	14.0	9.3	0.0093	7	
Worker Light Truck	Light	2	12	-	30	1.00	0.3	0.0016	0.35	0.1	0.0006	0	0.00	0.0000	0.06	0.02	0.0001	7.2	1.9	0.0115	7	
Maxima and Subtotals (Trenching and Utility Installation)							22.8	0.0924		3.0	0.0091		0.70	0.0019		1.28	0.0065		14.4	0.0309		
Access Road Construction (75cy)																						
Grader	200	4	3	1	-	2370	20.9	0.0313	180	1.6	0.0024	15	0.13	0.0002	135	1.19	0.0018	205	1.8	0.0027	6	
Dozer	153	4	3	1	-	1660	14.6	0.0220	110	1.0	0.0015	15	0.13	0.0002	105	0.93	0.0014	110	1.0	0.0015	6	
Gravel Truck	10 yd3	4	2	-	30	11.3	6.0	0.0060	2.2	1.2	0.0012	0.6	0.31	0.0003	0.3	0.16	0.0002	14	7.4	0.0074	7	
Compactor	-	4	2	1	-	1787	15.8	0.0158	71	0.6	0.0006	67	0.59	0.0006	235	2.07	0.0021	128	1.1	0.0011	8	
Equipment Delivery Truck	Low boy	1	2	-	30	11.3	1.5	0.0015	2.2	0.3	0.0003	0.6	0.08	0.0001	0.3	0.04	0.0000	14	1.9	0.0019	7	
Worker Light Truck	Light	2	8	-	30	1.0	0.3	0.0700	0.35	0.1	0.0004	0	0.00	0.0000	0.06	0.02	0.0001	7.2	1.9	0.0076	7	
Maxima and Subtotals (Access Road Construction)							28.6	0.1466		3.1	0.0064		0.98	0.0014		2.29	0.0056		13.0	0.0222		
Shelter Placement																						
Crane	150 ton	2	1	1	-	576	2.5	0.0013	82	0.4	0.0002	64	0.28	0.0001	41	0.18	0.0001	1624	7.2	0.0036	8	
Equipment Delivery Truck	Low boy	1	1	-	150	11.3	7.4	0.0037	2.2	1.5	0.0007	0.59	0.39	0.0002	0.31	0.21	0.0001	14.0	9.3	0.0046	7	
Worker Light Truck	Light	2	1	-	30	1.00	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	
Maxima and Subtotals (Shelter Placement)							10.2	0.0051		1.9	0.0010		0.67	0.0003		0.40	0.0002		18.4	0.0092		
General Construction Activities																						
Compactor	<25 hp	1	1	1	-	8	0.0	0.0000	227	0.5	0.0002	1.4	0.00	0.0000	0	0.00	0.0000	6350	14.0	0.0070	8	
Equipment Delivery Truck	Low boy	1	1	-	30	11.3	1.5	0.0007	2.2	0.3	0.0001	0.59	0.08	0.0000	0.31	0.04	0.0000	14.0	1.9	0.0009	7	
Construction Generator	<50 hp	8	12	1	-	0.02	0.0	0.0000	0.002	0.0	0.0000	0	0.00	0.0000	0.00	0.00	0.0000	0.01	0.0	0.0000	8	
Water Truck	4500 gal.	1	2	-	30	11.3	1.5	0.0015	2.2	0.3	0.0003	0.59	0.08	0.0001	0.31	0.04	0.0000	14.0	1.9	0.0019	6	
Worker Light Truck	Light	1	13	-	30	1.0	0.1	0.0009	0.35	0.0	0.0003	0	0.00	0.0000	0.06	0.01	0.0001	7.2	1.0	0.0062	7	
Maxima and Subtotals (General Construction)							3.1	0.0031		1.1	0.0010		0.16	0.0001		0.09	0.0001		18.7	0.0160		
Maxima and Subtotals, Construction Engine Emissions⁽³⁾							28.6	0.2488		3.1	0.0178		0.98	0.0038		2.29	0.0124		18.7	0.0811		
Total Construction Emissions (Fugitive plus exhaust)								0.2488			0.0178		22.26	0.1962			0.0124				0.0811	
Construction Thresholds																						
Insignificant Impact⁽⁹⁾							Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		

Construction Fugitive Dust Emissions

SOURCE	DAILY AMOUNT (hours)	DAYS OF ACTIVITY	AREA OF GRADING / TRENCHING	PM ₁₀ EMISSIONS			NOTES
				EF	(daily lbs)	(total tons)	
Site Grading	8	2	0.27 acres	39.4 lb/acre-day	11	0.011	14
Access Road Construction & Use	8	13	0.46 acres	39.4 lb/acre-day	18.1	0.118	
Trenching - Cable Installation	8	12	-	0.51 lb/hr	4.1	0.024	
Wind Erosion	24	25	0.48 acres	6.6 lb/acre-day	3.2	0.040	11
Subtotal, Construction Fugitive Emissions⁽³⁾					21	0.19	13
Total PM10 Construction Emissions (Engine Exhaust and Fugitive)⁽³⁾						0.20	

(Continued)

Operation Emissions ⁽⁴⁾

SOURCE	SIZE / GROSS HP	DAILY AMOUNT (hours)	DAYS OF ACTIVITY	NUMBER OF UNITS	ONE-WAY DISTANCE (miles)	NO _x			ROG			PM ₁₀			SO _x			CO			NOTES
						EF	Daily	Annual	EF	Daily	Annual	EF	Daily	Annual	EF	Daily	Annual	EF	Daily	Annual	
						(g/hr) ⁽²⁾	(lbs/day)	(tons/year)	(g/hr) ⁽²⁾	(lbs/day)	(tons/year)	(g/hr) ⁽²⁾	(lbs/day)	(tons/year)	(g/hr) ⁽²⁾	(lbs/day)	(tons/year)	(g/hr) ⁽²⁾	(lbs/day)	(tons/year)	
Emergency Generator	337 (300 KW)	0.5	60	1		2,325	3	0.08	337	0.37	0.01	135	0.15	0.004	313	0.35	0.010	2,865	3.2	0.09	6,12
Worker Light Truck	Light	-	60	1	30	1.0	0.13	0.004	0.35	0.05	0.001	0	0	0	0.06	0.01	0.0002	7.2	0.96	0.03	7
Total Operation Emissions ⁽⁵⁾							3	0.08		0.42	0.01		0.15	0.004		0.35	0.011		4.1	0.12	
Operation Thresholds						Exempt			Exempt			Exempt			Exempt			Exempt			
Insignifigant Impact ⁽¹⁰⁾						Yes			Yes			Yes			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) The 25-minute test cycle will be conducted mostly at 50 percent load. To be conservative, the horsepower is stated and emissions are calculated at 75 percent load.

(13) Daily construction fugitive emissions includes the specific activity plus wind erosion.

(14) Includes area of disturbance due to pad and shelter installation on presently graded site.