

Table 1. Summary of Revised Unmitigated Emissions Estimates/Comparison with Regional CEQA Thresholds

	Peak Daily Construction Emissions (lbs/day)					
	NO _x	VOC	CO	PM ₁₀	PM _{2.5}	SO ₂
Underground Hybrid I-15 230 kV Route (Proposed Project)	62.08	5.71	51.32	228.24	28.19	0.12
Wilderness and Wildlife Substations	5.61	0.39	5.40	73.36	20.31	0.02
Distribution Relocation	5.57	0.45	3.91	99.41	13.77	0.01
Total	73.26	6.55	60.63	401.01	62.28	0.15
<i>SCAQMD Daily Regional Significance Thresholds</i>	100	75	550	150	55	150
Exceed Threshold (Yes/No)?	No	No	No	Yes	Yes	No

Table 3. Summary of Revised Mitigated Emissions Estimates/Comparison with Regional CEQA Thresholds

	Peak Daily Construction Emissions (lbs/day)					
	NO _x	VOC	CO	PM ₁₀	PM _{2.5}	SO ₂
Underground Hybrid I-15 230 kV Route (Proposed Project)	30.85	2.86	43.28	79.56	24.27	0.12
Wilderness and Wildlife Substations	2.97	0.19	4.90	46.02	14.56	0.02
Distribution Relocation	3.51	0.17	4.29	83.03	10.23	0.01
Total	37.34	3.22	52.47	208.61	49.06	0.15
<i>SCAQMD Daily Regional Significance Thresholds</i>	100	75	550	150	55	150
Exceed Threshold (Yes/No)?	No	No	No	Yes	No	No

Table 2. Summary of Revised Unmitigated GHG Emissions Estimates/Comparison with SCAQMD Thresholds

Emission Source	Project GHG Emissions (metric tons)		
	CO₂	CH₄	CO₂e¹
Construction Equipment/Employee Commuting	1,832.45	0.00	1,832.45
SCAQMD Interim GHG Significance Threshold (Industrial Projects)			10,000
Exceeds Threshold (Yes/No)?			No

Table 4. Summary of Revised Mitigated GHG Emissions Estimates/Comparison with SCAQMD Threshold

Emission Source	Project GHG Emissions (metric tons)		
	CO₂	CH₄	CO₂e¹
Construction Equipment/Employee Commuting	1,832.45	0.00	1,832.45
SCAQMD Interim GHG Significance Threshold (Industrial Projects)			10,000
Exceeds Threshold (Yes/No)?			No

Underground Hydrocarbon (RTRP I-15 230 Kv Project) (2020)											Carbon Monoxide (CO)			Nitrogen Oxides (NOx)			Sulfur Dioxide (SO ₂)			Particulate Matter less than 10 Microns (PM10) [5]			Particulate Matter less than 2.5 Microns (PM2.5) [5]			Volatile Organic Compound (VOC)			Carbon Dioxide (CO ₂)			Methane (CH ₄)			Carbon Dioxide Equivalent (CO ₂ e) [3]								
Primary Emission Description (1)	Hexapage (2)	Fuel Type (3)	Primary Resource Quantity (4)	Estimated Activity (kg/day) (5)	Estimated Emission Factor (lb/MMBtu) (6)	Estimated Distance (Miles Per Day) (7)	Emission Methodology (8)	Emission Factor (lb/hr or lb/ton) (9)	Pound Per Day (lb/day) (10)	Total Emissions (Tons) (11)	Emission Factor (lb/hr or lb/ton) (12)	Pound Per Day (lb/day) (13)	Total Emissions (Tons) (14)	Emission Factor (lb/hr or lb/ton) (15)	Pound Per Day (lb/day) (16)	Total Emissions (Tons) (17)	Emission Factor (lb/hr or lb/ton) (18)	Pound Per Day (lb/day) (19)	Total Emissions (Tons) (20)	Emission Factor (lb/hr or lb/ton) (21)	Pound Per Day (lb/day) (22)	Total Emissions (Tons) (23)	Emission Factor (lb/hr or lb/ton) (24)	Pound Per Day (lb/day) (25)	Total Emissions (Tons) (26)	Emission Factor (lb/hr or lb/ton) (27)	Pound Per Day (lb/day) (28)	Total Emissions (Tons) (29)	Emission Factor (lb/hr or lb/ton) (30)	Pound Per Day (lb/day) (31)	Total Emissions (Tons) (32)	Emission Factor (lb/hr or lb/ton) (33)	Pound Per Day (lb/day) (34)	Total Emissions (Tons) (35)									
Crane Lift	275	Diesel	1	120	10.00		Dir/Route E-F	0.0817	4,673	0.006	0.0781	6,708	0.007	0.0817	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722							
RT Excavator	1	Diesel	1	120	10.00		Dir/Route E-F	0.0817	4,673	0.006	0.0781	6,708	0.007	0.0817	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722							
Motor Vehicle	1	Diesel	1	120	10.00		Dir/Route E-F	0.0817	4,673	0.006	0.0781	6,708	0.007	0.0817	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722							
RT Excavator	1	Diesel	1	120	10.00		Dir/Route E-F	0.0817	4,673	0.006	0.0781	6,708	0.007	0.0817	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722							
RT Excavator	1	Diesel	1	120	10.00		Dir/Route E-F	0.0817	4,673	0.006	0.0781	6,708	0.007	0.0817	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722	0.006	0.0781	3,722							
RT Excavator, daily adds Marshaling Van (see note 3)											6.19	0.07	0.006	5.28	0.07	0.006	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
French Reinforcement/Finishing																																											
L-Ton Truck, 40	300	Gas	2	30	4.00	30.00	Dir/Route E-F	0.0002	0.1029	0.0002	0.0006	0.0013	0.0007	0.0006	0.0010	0.0002	0.0002	0.0014	0.0002	0.0001	0.0004	0.0003	0.0002	0.0007	0.0003	0.0006	0.0007	0.0003	0.0006	0.0007	0.0003	0.0006	0.0007	0.0003	0.0006	0.0007							
Compactor	75	Diesel	1	30	10.00		Dir/Route E-F	0.0003	2,033	0.0002	0.0003	2,034	0.0003	0.0003	0.0002	0.0003	0.0002	0.0003	926	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003								
Gravel Truck	100	Diesel	1	30	10.00	30.00	Dir/Route E-F	0.0003	2,033	0.0002	0.0003	2,034	0.0003	0.0003	0.0002	0.0003	0.0002	0.0003	926	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003								
Compactor	40	Diesel	1	30	10.00		Dir/Route E-F	0.0003	2,033	0.0002	0.0003	2,034	0.0003	0.0003	0.0002	0.0003	0.0002	0.0003	926	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003								
Concrete Pallet	40	Diesel	1	30	10.00		Dir/Route E-F	0.0003	2,033	0.0002	0.0003	2,034	0.0003	0.0003	0.0002	0.0003	0.0002	0.0003	926	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003								
Gravel Truck	100	Diesel	1	30	10.00	30.00	Dir/Route E-F	0.0003	2,033	0.0002	0.0003	2,034	0.0003	0.0003	0.0002	0.0003	0.0002	0.0003	926	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003								
RT Excavator, daily adds Marshaling Van (see note 3)											6.19	0.07	0.006	5.28	0.07	0.006	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Reinforcement																																											
L-Ton Truck, 40	300	Gas	2	13	4.00	30.00	Dir/Route E-F	0.0002	0.1029	0.0001	0.0006	0.0013	0.0003	0.0002	0.0010	0.0002	0.0002	0.0014	0.0001	0.0003	0.0004	0.0003	0.0002	0.0007	0.0003	0.0006	0.0007	0.0003	0.0006	0.0007	0.0003	0.0006	0.0007	0.0003	0.0006	0.0007							
Reinforcement Layer	150	Diesel	1	11	8.00		Dir/Route E-F	0.0002	1,318	0.0001	0.0002	1,319	0.0001	0.0002	0.0001	0.0002	0.0001	0.0002	574	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001								
Motor Grader	250	Diesel	1	13	4.00		Dir/Route E-F	0.0002	1,129	0.0001	0.0002	1,131	0.0001	0.0002	0.0001	0.0002	0.0001	0.0002	518	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001								
Gravel Truck	100	Diesel	1	13	4.00	30.00	Dir/Route E-F	0.0001	513	0.0001	0.0001	515	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	257	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001								
Crane Company	100	Diesel	1	13	4.00		Dir/Route E-F	0.0001	513	0.0001	0.0001	515	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	257	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001								
Motor Grader	250	Diesel	1	13	4.00		Dir/Route E-F	0.0001	513	0.0001	0.0001	515	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	257	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001								
RT Excavator	1	Diesel	7	11	8.00	30.00	Dir/Route E-F	0.0002	1,318	0.0001	0.0002	1,319	0.0001	0.0002	0.0001	0.0002	0.0001	0.0002	574	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001								
RT Excavator, daily adds Marshaling Van (see note 3)											6.19	0.07	0.006	5.28	0.07	0.006	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Operational Maintenance (3)																																											
Track, Flatbed, w/ Boom, 5 Ton	350	Diesel	1	25	4.00	40.00	Dir/Route E-F	0.0013	5,056	0.0007	0.0026	10,421	0.0008	0.0031	0.0006	0.0024	0.0003	0.0016	6,454	0.0003	0.0011	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003								
-TOTAL- (3)											262.58	6.75	0.0006	222.08	8.24	0.0006	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Simple Highrise (broad) Emissions for all Construction Phases (3)											51.32			62.08			0.12										1.88																
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Length of Travel Time (Hours)	Length of Unpaired Road (Miles)	Fugitive PM10 Emissions (Travel Over Paired Roads)			Fugitive PM2.5 Emissions (Travel Over Paired Roads)			Fugitive PM10 Emissions (Travel Over Unpaired Roads)			Fugitive PM2.5 Emissions (Travel Over Unpaired Roads)		
		Emission Factor (lb/MVMT)	Paired Road Emissions (lb/day)	Total Emissions (lb/day)	Emission Factor (lb/MVMT)	Paired Road Emissions (lb/day)	Total Emissions (lb/day)	Emission Factor (lb/MVMT)	Paired Road Emissions (lb/day)	Total Emissions (lb/day)	Emission Factor (lb/MVMT)	Paired Road Emissions (lb/day)	Total Emissions (lb/day)
26.00		0.00144	0.46525	0.02063	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
			2.19	0.12		0.00	0.01		0.00000	0.00000	0.00000	0.00	0.00
26.37	6.73	0.00070	1.04844	0.00033	0.00033	0.14304	0.00015	1.89600	17.88512	0.26638	0.18900	1.18951	0.02663
26.37	4.73	0.00074	1.04844	0.00033	0.00033	0.14304	0.00015	1.89600	17.88512	0.26638	0.18900	1.18951	0.02663
40.00		0.00144	0.34541	0.00019	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
			3.20	0.04		0.00	0.00		44.71	0.54		4.47	0.06
26.37	6.73	0.00074	1.04844	0.00007	0.00033	0.14304	0.00079	1.89600	17.88512	0.06917	0.18900	1.18951	0.00043
26.37	4.73	0.00070	0.25242	0.00008	0.00033	0.07152	0.00039	1.89600	8.94256	0.03910	0.18900	0.89426	0.0048
26.37	4.73	0.00074	0.25242	0.00009	0.00033	0.07152	0.00039	1.89600	8.94256	0.03910	0.18900	0.89426	0.0048
40.00		0.00144	0.42036	0.00005	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
			4.35	0.01		0.00	0.00		44.71	0.30		4.47	0.02
26.37	4.73	0.00074	0.32422	0.00081	0.00033	0.07152	0.00089	1.89600	8.94256	0.11625	0.18900	0.89426	0.01663
			10.39	2.99		11.79	0.35		971.92	19.96		17.19	2.00
			21.16	1.12		2.70	0.14		176.85	4.38		17.89	0.44

TABLE 1
 (1) Data obtained from APPENDIX TABLE 2.5. CONSTRUCTION EQUIPMENT AND WORKFORCE ESTIMATES BY ACTIVITY, CONSTRUCT DOWD CROFT SYSTEM.
 (2) Duration (hours) assumed to be 30 hours for relevant tasks and 40 hours otherwise.
 (3) Emission factors for removal and off-road vehicles are obtained from SCQM2000 website.
 (4) Hours spent (person-hours) on construction activities are obtained from the SCQM2000 website.
 (5) For off-road equipment, the emission factor was used to calculate PM10 emissions.
 (6) The SCQM2000 derived default rate for estimating PM10 to the off-road construction source was obtained from the equation $PM_{10} = 0.0001 \times PM_{2.5}$.
 (7) Carbon Dioxide Equivalent (CO2e) assumes a GWP of 1 for CO2 and 25 for CH4, which are present in Table 3. Greenhouse Gas and Global Warming Potential, Comprehensive Greenhouse Gas Emissions Methodology for the Oil and Gas Industry dated February 2004 (2004).
 (8) The SCQM2000 website provides a default emission factor for diesel engines assuming that one mile truck drive rate exists during the RTD90 (0.12 mile) every two weeks as part of a long-haul equipment maintenance schedule.
 (9) Total Emissions were obtained by the sum of all of the emission source pages not including Operation/Maintenance.
 (10) The highest emissions by activity are shown in the table. The highest emissions by activity are shown in the table. The highest emissions by activity are shown in the table. The construction phases with the highest daily emissions were determined to be the Inland Construction & O&M Phase.

Additional notes with revision performed in November 2015:

All Off-Road E.F.s, except Sulfur Oxides and Carbon Dioxide (both retained from OFFROAD 2007), obtained from Default Data Tables Appendix D of CalFEModel Users Guide (OFFROAD 2010).

A load factor (also obtained from the CalEEMod User's Guide Appendix D: Default Data Tables) was used in the calculation of the Off-Road E.F.s presented above.

As factors for methane emissions were not readily available from EMFAC2014, and were shown to be at least several orders of magnitude lower than

Six left-most columns of Project Description information updated to agree with updated Table 2.5-1 (2016-0912).

$\cdot$ PM _{2.5} Fraction of PM ₁₀ , Diesel off-road equipment	=	0.920
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Additional notes with revision performed in September 2016:

Emissions from the Marshaling Yard phase were conservatively added to the Pound per Day (daily) subtotals of each of the other phases as it is considered on-going and parallels the other activities.

Underground Hybrid--RTRP 1-15 230 kV Project (2020)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Note:
[1] Data obtained from RTRP - TABLE 2.5-1. CONSTRUCTION EQUIPMENT AND WORKFORCE ESTIMATES BY ACTIVITY, CONSTRUCT DOUBLE CIRCUIT 230KV TL.
[2] Emission factor is assumed to be 20 lb/hr for 1-ton truck and 40 lb/hr for 2-ton truck.
[3] Emission factor for diesel and off-road vehicles are obtained from EPA/NO2 website.
[4] Emission factor for diesel and off-road vehicles are obtained from EPA/NO2 website.
[5] Emission factor for diesel and off-road vehicles are obtained from EPA/NO2 website.
[6] Emission factor for diesel and off-road vehicles are obtained from EPA/NO2 website.
[7] Emission factor for diesel and off-road vehicles are obtained from EPA/NO2 website.
[8] Emission factor for diesel and off-road vehicles are obtained from EPA/NO2 website.
[9] Emission factor for diesel and off-road vehicles are obtained from EPA/NO2 website.
[10] Emission factor for diesel and off-road vehicles are obtained from EPA/NO2 website.
[11] Emission factor for diesel and off-road vehicles are obtained from EPA/NO2 website.

Additional notes with revision performed in November 2015:
All Off-Road E.F.s, except Sulfur Dioxide and Carbon Dioxide (both retrieved from OFFROAD 2007), obtained from Default Data Tables Appendix D of CalEEMod User's Guide (OFFROAD 2015).
A fuel factor (also obtained from the CalEEMod User's Guide Appendix D: Default Data Tables) was used in the calculation of the Off-Road E.F.s presented above.
All Off-Road E.F.s obtained using EMFAC2014 for their state average in Calendar Year 2010 (see table at right named "EMFAC2014 StateAve 2010").
As factors for methane emissions were not readily available from EMFAC2014, and were shown to be at least several orders of magnitude lower than those for CO2 (per an equivalent basis), the estimation of methane emissions was removed from the quantitative analysis.
Six left-most columns of Project Description information updated to agree with updated Table 2.5-1 (2016-2017).
PM10 emission factors determined using guidance from SCAG/MD Final - Methodology to Calculate PM10 and PM2.5 Significance Thresholds 10/12/2006.
PM2.5 Fraction of PM10, Default off-road equipment = 0.100.

Additional notes with revision performed in September 2016:
Tailpipe emissions from the Marshalling Yard phase were conservatively added to the Pound per Day (daily) subtotals of each of the other phases as it is conservatively considered on-going and parallels the other activities.
The paved and unpaved travel distances for on-road vehicles during underground-related activities were estimated to be 25 miles and 1 mile.

Length of Paved Roads (miles)	Length of Unpaved Roads (miles)	Fugitive PM10 Emissions (Travel Over Paved Roads)			Fugitive PM2.5 Emissions (Travel Over Paved Roads)			Fugitive PM10 Emissions (Travel Over Unpaved Roads)			Fugitive PM2.5 Emissions (Travel Over Unpaved Roads)		
		Emission Factor (lb/MT)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/MT)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/MT)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/MT)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
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		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
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		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
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		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
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		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
40.00		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.00000
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
25.27	4.73	0.00074	1.04844	0.00073	0.00083	0.14304	0.00015	0.26936	1.44802	0.00022	0.16634	1.50451	0.00389
		0.00144	0.46055	0.00000	0.00000	0.00000	0.00000	0.00144	0.46055	0.00000	0.00000	0.00000	0.000

RTRP
Table A-3
230kV Substation
Wilderness Substation
Criteria Air Pollutant Emissions and Fugitive Dust Emissions from Vehicles Traveling on Paved and Unpaved Roads--UNMITGATED

RTRP Wilderness & Wildlife Substation Projects (2020)				(Construction Area = 9.6 Acres)			Emission Estimation Methodology [14]	Carbon Monoxide (CO)		Nitrogen Oxides (NOx)		Sulfur Oxides (SOx)		Particulate Matter less than 10 Microns (PM10) [5]		Particulate Matter less than 2.5 Microns (PM2.5) [6]		Volatile Organic Compound (VOC)		Carbon Dioxide (CO2)		Methane (CH4)		Carbon Dioxide Equivalent (CO2e) [7]									
Primary Equipment Description [1]	Horsepower [1]	Fuel Type [1]	Primary Equipment Quantity [1]	Estimated Activity Schedule (days) [1]	Estimated Equipment Usage Time (hr/day) [1]	Estimated Distance Traveled (miles/day) [2]		Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)					
Marshalling Yard				(1 Crew)																													
Forklift, 5 Ton	200	Diesel	1	140	1.00	-	Off-Road E.F.	0.12714	0.12714	0.00890	0.28585	0.28585	0.02001	0.00043	0.00043	0.00003	0.01110	0.01110	0.00078	92% of PM10	0.01021	0.00071	0.02582	0.02582	0.00181	41.73946	41.73946	2.92176	0.00000	0.00000	0.00000	41.73946	2.92176
Truck, Flat Bed, 1 Ton	300	Diesel	1	140	2.00	-	On-Road E.F.	0.00126	0.03794	0.00266	0.01054	0.31629	0.02214	0.00003	0.00099	0.00007	0.00027	0.00799	0.00056	0.00013	0.00380	0.00027	0.00031	0.00930	0.00065	3.47481	104.24439	7.29711	0.00000	0.00000	0.00000	104.24439	7.29711
Truck, Pick-Up	200	Gas	1	140	2.00	30.00	On-Road E.F.	0.00399	0.11958	0.00837	0.00038	0.01132	0.00079	0.00001	0.00023	0.00002	0.00011	0.00318	0.00002	0.00005	0.00013	0.00026	0.00019	0.00009	0.77065	23.11961	1.61837	0.00000	0.00000	0.00000	23.11961	1.61837	
Worker Vehicles	200	Gas	2	140	8.00	40.00	On-Road E.F.	0.00185	0.14788	0.01034	0.00017	0.01335	0.00093	0.00001	0.00057	0.00004	0.00010	0.00826	0.00058	0.00004	0.00347	0.00024	0.00004	0.00309	0.00022	0.71439	57.15156	4.00061	0.00000	0.00000	0.00000	57.15156	4.00061
<SUBTOTAL>								0.43234	0.03026		0.62681	0.04388		0.00223	0.00016		0.03054	0.00214		0.01887	0.00132		0.04094	0.00287		226.25501	15.83785		0.00000	0.00000		226.25501	15.83785
Survey				(1 Crew)																													
Truck, Pick-Up	200	Gas	1	8.0	4.00	30.00	On-Road E.F.	0.00399	0.11958	0.00048	0.00038	0.01132	0.00005	0.00001	0.00023	0.00000	0.00011	0.00318	0.00001	0.00005	0.00138	0.00001	0.00009	0.00272	0.00001	0.77065	23.11961	0.09248	0.00000	0.00000	0.00000	23.11961	0.09248
Civil				(1 Crew)																													
Backhoe w/ Bucket	175	Diesel	1	22	3.00	-	Off-Road E.F.	0.44325	1.32976	0.01463	0.34469	1.03406	0.01137	0.00069	0.00206	0.00002	0.01737	0.05212	0.00057	92% of PM10	0.04795	0.00053	0.03504	0.10513	0.00116	66.73607	200.20820	2.20229	0.00000	0.00000	0.00000	200.20820	2.20229
Drill Rig	175	Diesel	1	100	4.00	-	Off-Road E.F.	0.57282	2.29127	0.11456	0.36101	1.44405	0.07220	0.00095	0.00376	0.00019	0.01586	0.06343	0.00317	92% of PM10	0.05835	0.00382	0.03382	0.13448	0.00672	92.15318	368.61265	18.43063	0.00000	0.00000	0.00000	368.61265	18.43063
Forklift, 5 Ton	175	Diesel	1	100	2.00	-	Off-Road E.F.	0.25068	0.50137	0.02507	0.25614	0.51228	0.02561	0.00038	0.00076	0.00004	0.01387	0.02773	0.00139	92% of PM10	0.02551	0.00128	0.02609	0.05218	0.00261	36.42795	72.85590	3.64279	0.00000	0.00000	0.00000	72.85590	3.64279
Truck, Concrete, 10 Yard	425	Diesel	4	60	4.00	30.00	On-Road E.F.	0.00126	0.15177	0.00455	0.01054	1.26514	0.03795	0.00003	0.00398	0.00012	0.00027	0.03194	0.00096	0.00013	0.01520	0.00046	0.00031	0.03721	0.00112	3.47481	416.97755	12.50933	0.00000	0.00000	0.00000	416.97755	12.50933
Truck, Dump, 10 Ton	350	Diesel	1	80	1.00	30.00	On-Road E.F.	0.00126	0.03794	0.00152	0.01054	0.31629	0.01285	0.00003	0.00099	0.00004	0.00027	0.00799	0.00032	0.00013	0.00380	0.00015	0.00031	0.00930	0.00037	3.47481	104.24439	4.18978	0.00000	0.00000	0.00000	104.24439	4.18978
Truck, Flat Bed, 5 Ton	300	Diesel	1	100	1.00	30.00	On-Road E.F.	0.00126	0.03794	0.00190	0.01054	0.31629	0.01581	0.00003	0.00099	0.00005	0.00027	0.00799	0.00040	0.00013	0.00380	0.00019	0.00031	0.00930	0.00047	3.47481	104.24439	5.21222	0.00000	0.00000	0.00000	104.24439	5.21222
Truck, Flat Bed w/ Boom, 5 Ton	300	Diesel	1	100	2.00	30.00	On-Road E.F.	0.00126	0.03794	0.00190	0.01054	0.31629	0.01581	0.00003	0.00099	0.00005	0.00027	0.00799	0.00040	0.00013	0.00380	0.00019	0.00031	0.00930	0.00047	3.47481	104.24439	5.21222	0.00000	0.00000	0.00000	104.24439	5.21222
Truck, Pick-Up	200	Gas	2	100	2.00	30.00	On-Road E.F.	0.00399	0.23917	0.01196	0.00038	0.02264	0.00113	0.00001	0.00047	0.00002	0.00011	0.00637	0.00032	0.00005	0.00276	0.00014	0.00009	0.00545	0.00027	0.77065	46.23921	2.31196	0.00000	0.00000	0.00000	46.23921	2.31196
Water Truck	350	Diesel	1	100	3.00	30.00	On-Road E.F.	0.00126	0.03794	0.00190	0.01054	0.31629	0.01581	0.00003	0.00099	0.00005	0.00027	0.00799	0.00040	0.00013	0.00380	0.00019	0.00031	0.00930	0.00047	3.47481	104.24439	5.21222	0.00000	0.00000	0.00000	104.24439	5.21222
Worker Vehicles	200	Gas	10	100	8.00	40.00	On-Road E.F.	0.00185	0.73838	0.00362	0.00017	0.06676	0.00334	0.00001	0.00286	0.00014	0.00010	0.04132	0.00207	0.00004	0.01736	0.00087	0.00004	0.01547	0.00077	0.71439	285.75779	14.28789	0.00000	0.00000	0.00000	285.75779	14.28789
<SUBTOTAL>								5.40348	0.21490		5.61008	0.21171		0.01788	0.00072		0.25484	0.00999		0.18234	0.00690		0.38713	0.01442		1807.62885	73.19133		0.00000	0.00000		1807.62885	73.19133
Electrical				(1 Crew)																													
Crane Truck, 30 Ton	250	Diesel	1	100	1.00	-	Off-Road E.F.	0.28616	0.28616	0.01431	0.72396	0.72396	0.03647	0.00078	0.00078	0.00004	0.03006	0.03006	0.00150	92% of PM10	0.02766	0.00138	0.06133	0.06133	0.00307	75.59257	75.59257	3.77963	0.00000	0.00000	0.00000	75.59257	3.77963
Forklift, 5 Ton	175	Diesel	1	150	2.00	-	Off-Road E.F.	0.25068	0.50137	0.03760	0.25614	0.51228	0.03842	0.00038	0.00076	0.00006	0.01387	0.02773	0.00208	92% of PM10	0.02551	0.00191	0.02609	0.05218	0.00391	36.42795	72.85590	5.46419	0.00000	0.00000	0.00000	72.85590	5.46419
Truck, Flat Bed w/ Boom, 8 Ton	300	Diesel	1	150	2.00	30.00	On-Road E.F.	0.00126	0.03794	0.00285	0.01054	0.31629	0.02372	0.00003	0.00099	0.00007	0.00027	0.00799	0.00060	0.00013	0.00380	0.00029	0.00031	0.00930	0.00070	3.47481	104.24439	7.81833	0.00000	0.00000	0.00000	104.24439	7.81833
Truck, Flat Bed w/ Bucket, 5 Ton	350	Diesel	1	150	1.00	30.00	On-Road E.F.	0.00126	0.03794	0.00285	0.01054	0.31629	0.02372	0.00003	0.00099	0.00007	0.00027	0.00799	0.00060	0.00013	0.00380	0.00029	0.00031	0.00930	0.00070	3.47481	104.24439	7.81833	0.00000	0.00000	0.00000	104.24439	7.81833
Truck, Pick-Up	200	Gas	2	150	2.00	30.00	On-Road E.F.	0.00399	0.23917	0.01194	0.00038	0.02264	0.00170	0.00001	0.00047	0.00003	0.00011	0.00637	0.00048	0.00005	0.00276	0.00021	0.00009	0.00545	0.00041	0.77065	46.23921	3.46794	0.00000	0.00000	0.00000	46.23921	3.46794
Worker Vehicles	200	Gas	10	150	8.00	40.00	On-Road E.F.	0.00185	0.73838	0.00538	0.00017	0.06676	0.00501	0.00001	0.00286	0.00021	0.00010	0.04132	0.00207	0.00004	0.01736	0.00130	0.00004	0.01547	0.00116	0.71439	285.75779	21.43183	0.00000	0.00000	0.00000	285.75779	21.43183
<SUBTOTAL>								1.84096	0.13092		1.96362	0.12904		0.00686	0.00049		0.12145	0.00836		0.08089	0.00538		0.15303	0.00994		688.93424	49.78025		0.00000	0.00000		688.93424	49.78025
Paving				(1 Crew)																													
Compactor, Tamper	15	Diesel	1	20	2.00	-	Off-Road E.F.	0.07506	0.15012	0.00150	0.06995	0.13990	0.00140	0.00008	0.00015	0.00000	0.00563	0.01126	0.00011	92% of PM10	0.01036	0.00010	0.01489	0.02978	0.00030	7.33286	14.66571	0.14666	0.00000	0.00000	0.00000	14.66571	0.14666
Loader, Wheeled	250	Diesel	1	20	2.00		On-Road E.F.	0.25176	0.50351	0.00504	0.67880	1.35760	0.01158	0.00095	0.00130	0.00002	0.02254	0.04508	0.														

RTRP
Table A-4
230kV Substation
Wilderness Substation
Criteria Air Pollutant Emissions and Fugitive Dust Emissions from Vehicles Traveling on Paved and Unpaved Roads--MITIGATED

RTRP Wilderness & Wildlife Substation Projects (2020)				(Construction Area = 9.6 Acres)			Emission Estimation Methodology [3][4]	Carbon Monoxide (CO)			Nitrogen Oxides (NOx)			Sulfur Oxides (SO _x)	Carbon Dioxide (CO ₂)			Methane (CH ₄)			Carbon Dioxide Equivalent (CO ₂ e) [7]	
Primary Equipment Description [1]	Horsepower [1]	Fuel Type [1]	Primary Equipment Quantity [1]	Estimated Activity Schedule (days) [1]	Estimated Equipment Usage Time (hr/day) [1]	Estimated Distance Traveled (miles/day) [2]		Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)		Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)
Marshalling Yard				(1 Crew)																		
Forklift, 5 Ton	200	Diesel	1	140	1.00	-	Off-Road E.F.	0.32628	0.32628	0.02284	0.02293	0.02293	0.00160	0.00043	41.73946	41.73946	2.92176	0.00000	0.00000	0.00000	41.73946	2.92176
Truck, Flat Bed, 1 Ton	300	Diesel	1	140	2.00	30.00	On-Road E.F.	0.00126	0.03794	0.00266	0.01054	0.31629	0.02214	0.00003	3.47481	104.24439	7.29711	0.00000	0.00000	0.00000	104.24439	7.29711
Truck, Pick-Up	200	Gas	1	140	2.00	30.00	On-Road E.F.	0.00399	0.11958	0.00837	0.00038	0.01132	0.00079	0.00001	0.77065	23.11961	1.61837	0.00000	0.00000	0.00000	23.11961	1.61837
Worker Vehicles	200	Gas	2	140	8.00	40.00	On-Road E.F.	0.00185	0.14768	0.01034	0.00017	0.01335	0.00093	0.00001	0.71439	57.15156	4.00061	0.00000	0.00000	0.00000	57.15156	4.00061
<SUBTOTAL>								0.63148	0.04420		0.36389	0.02547			226.25501	15.83785		0.00000	0.00000		226.25501	15.83785
Survey				(1 Crew)																		
Truck, Pick-Up	200	Gas	1	8.0	4.00	30.00	On-Road E.F.	0.00399	0.11958	0.00048	0.00038	0.01132	0.00005	0.00001	0.77065	23.11961	0.09248	0.00000	0.00000	0.00000	23.11961	0.09248
Civil				(1 Crew)																		
Backhoe w/ Bucket	175	Diesel	1	22	3.00	-	Off-Road E.F.	0.52816	1.58449	0.01743	0.03711	0.11134	0.00122	0.00069	66.73607	200.20820	2.20229	0.00000	0.00000	0.00000	200.20820	2.20229
Drill Rig	175	Diesel	1	100	4.00	-	Off-Road E.F.	0.42438	1.69753	0.08488	0.05015	0.20062	0.01003	0.00095	92.15316	368.61265	18.43063	0.00000	0.00000	0.00000	368.61265	18.43063
Forklift, 5 Ton	175	Diesel	1	100	2.00	-	Off-Road E.F.	0.16975	0.33951	0.01698	0.02006	0.04012	0.00201	0.00038	36.42795	72.85590	3.64279	0.00000	0.00000	0.00000	72.85590	3.64279
Truck, Concrete, 10 Yard	425	Diesel	4	60	4.00	30.00	On-Road E.F.	0.00126	0.15177	0.00455	0.01054	1.26514	0.03795	0.00003	3.47481	416.97755	12.50933	0.00000	0.00000	0.00000	416.97755	12.50933
Truck, Dump, 10 Ton	350	Diesel	1	80	1.00	30.00	On-Road E.F.	0.00126	0.03794	0.00152	0.01054	0.31629	0.01265	0.00003	3.47481	104.24439	4.16978	0.00000	0.00000	0.00000	104.24439	4.16978
Truck, Flat Bed, 5 Ton	300	Diesel	1	100	1.00	30.00	On-Road E.F.	0.00126	0.03794	0.00190	0.01054	0.31629	0.01581	0.00003	3.47481	104.24439	5.21222	0.00000	0.00000	0.00000	104.24439	5.21222
Truck, Flat Bed w/ Boom, 5 Ton	300	Diesel	1	100	2.00	30.00	On-Road E.F.	0.00126	0.03794	0.00190	0.01054	0.31629	0.01581	0.00003	3.47481	104.24439	5.21222	0.00000	0.00000	0.00000	104.24439	5.21222
Truck, Pick-Up	200	Gas	2	100	2.00	30.00	On-Road E.F.	0.00399	0.23917	0.01196	0.00038	0.02264	0.00113	0.00001	0.77065	46.23921	2.31196	0.00000	0.00000	0.00000	46.23921	2.31196
Water Truck	350	Diesel	1	100	3.00	30.00	On-Road E.F.	0.00126	0.03794	0.00190	0.01054	0.31629	0.01581	0.00003	3.47481	104.24439	5.21222	0.00000	0.00000	0.00000	104.24439	5.21222
Worker Vehicles	200	Gas	10	100	8.00	40.00	On-Road E.F.	0.00185	0.73838	0.03692	0.00017	0.06676	0.00334	0.00001	0.71439	285.75779	14.28789	0.00000	0.00000	0.00000	285.75779	14.28789
<SUBTOTAL>								4.90261	0.17992		2.97177	0.11578			1807.62885	73.19133		0.00000	0.00000		1807.62885	73.19133
Electrical				(1 Crew)																		
Crane Truck, 30 Ton	250	Diesel	1	100	1.00	-	Off-Road E.F.	0.35163	0.35163	0.01758	0.04156	0.04156	0.00208	0.00078	75.59257	75.59257	3.77963	0.00000	0.00000	0.00000	75.59257	3.77963
Forklift, 5 Ton	175	Diesel	1	150	2.00	-	Off-Road E.F.	0.16975	0.33951	0.02546	0.02006	0.04012	0.00301	0.00038	36.42795	72.85590	3.64279	0.00000	0.00000	0.00000	72.85590	3.64279
Truck, Flat Bed w/ Boom, 8 Ton	300	Diesel	1	150	2.00	30.00	On-Road E.F.	0.00126	0.03794	0.00285	0.01054	0.31629	0.02372	0.00003	3.47481	104.24439	7.81833	0.00000	0.00000	0.00000	104.24439	7.81833
Truck, Flat Bed w/ Bucket, 5 Ton	350	Diesel	1	150	1.00	30.00	On-Road E.F.	0.00126	0.03794	0.00285	0.01054	0.31629	0.02372	0.00003	3.47481	104.24439	7.81833	0.00000	0.00000	0.00000	104.24439	7.81833
Truck, Pick-Up	200	Gas	2	150	2.00	30.00	On-Road E.F.	0.00399	0.23917	0.01794	0.00038	0.02264	0.00170	0.00001	0.77065	46.23921	3.46794	0.00000	0.00000	0.00000	46.23921	3.46794
Worker Vehicles	200	Gas	10	150	8.00	40.00	On-Road E.F.	0.00185	0.73838	0.05538	0.00017	0.06676	0.00501	0.00001	0.71439	285.75779	21.43183	0.00000	0.00000	0.00000	285.75779	21.43183
<SUBTOTAL>								1.74457	0.12205		0.80366	0.05924			688.93424	49.78025		0.00000	0.00000		688.93424	49.78025
Paving				(1 Crew)																		
Compactor, Tamper	15	Diesel	1	20	2.00	-	Off-Road E.F.	0.07506	0.15012	0.00150	0.07506	0.15012	0.00150	0.00008	7.33286	14.66571	0.14666	0.00000	0.00000	0.00000	14.66571	0.14666
Loader, Wheeled	250	Diesel	1	20	2.00	-	Off-Road E.F.	0.43651	0.87302	0.00873	0.05159	0.10317	0.00103	0.00095	93.15728	186.31456	1.86315	0.00000	0.00000	0.00000	186.31456	1.86315
Truck, Dump, 10 Ton	350	Diesel	1	20	2.00	30.00	On-Road E.F.	0.00126	0.03794	0.00038	0.01054	0.31629	0.00316	0.00003	3.47481	104.24439	1.04244	0.00000	0.00000	0.00000	104.24439	1.04244
Truck, Pick-Up	200	Gas	1	20	2.00	30.00	On-Road E.F.	0.00399	0.11958	0.00120	0.00038	0.01132	0.00011	0.00001	0.77065	23.11961	0.23120	0.00000	0.00000	0.00000	23.11961	0.23120
Worker Vehicles	200	Gas	5	20	8.00	40.00	On-Road E.F.	0.00185	0.36919	0.00369	0.00017	0.03338	0.00033	0.00001	0.71439	142.87889	1.42879	0.00000	0.00000	0.00000	142.87889	1.42879
<SUBTOTAL>								1.54985	0.01550		0.61429	0.00614			471.22316	4.71223		0.00000	0.00000		471.22316	4.71223
Fencing				(1 Crew)																		
Forklift, 5 Ton	175	Diesel	1	35	2.00	-	Off-Road E.F.	0.16975	0.33951	0.00594	0.02006	0.04012	0.00070	0.00038	36.42795	72.85590	1.27498	0.00000	0.00000	0.00000	72.85590	1.27498
Loader, Wheeled	250	Diesel	1	35	1.00	-	Off-Road E.F.	0.43651	0.87302	0.00764	0.05159	0.05159	0.00090	0.00095	93.15728	93.15728	1.63025	0.00000	0.00000	0.00000	93.15728	1.63025
Truck, Flat Bed, 5 Ton	300	Diesel	1	35	2.00	30.00	On-Road E.F.	0.00126	0.03794	0.00066	0.01054	0.31629	0.00553	0.00003	3.47481	104.24439	1.82428	0.00000	0.00000	0.00000	104.24439	1.82428
Truck, Pick-Up	200	Gas	1	35	2.00	30.00	On-Road E.F.	0.00399	0.11958	0.00209	0.00038	0.01132	0.00020	0.00001	0.77065	23.11961	0.40459	0.00000	0.00000	0.00000	23.11961	0.40459
Worker Vehicles	200	Gas	4	30	8.00	40.00	On-Road E.F.	0.00185	0.29535	0.00443	0.00017	0.02670	0.00040	0.00001	0.71439	114.30311	1.71455	0.00000	0.00000	0.00000	114.30311	1.71455
<SUBTOTAL>								0.41493	0.00652		0.03803	0.00060			137.42272	2.11914		0.00000	0.00000		137.42272	2.11914
Testing				(1 Crew)																		
Truck, Pick-Up	200	Gas	2	80	3.00	30.00	On-Road E.F.	0.00399	0.23917	0.00957	0.00038	0.02264	0.00091	0.00001	0.77065	46.23921	1.84957	0.00000	0.00000	0.00000	46.23921	1.84957
Worker Vehicles	200	Gas	4	80	8.00	40.00	On-Road E.F.	0.00185	0.29535	0.01181	0.00017	0.02670	0.00107	0.00001	0.71439	114.30311	4.57212	0.00000	0.00000	0.00000	114.30311	4.57212
<SUBTOTAL>								0.53452	0.02138		0.04935	0.00197			160.54233	6.42169		0.00000	0.00000		160.54233	6.42169
Operational Maintenance [8]				(1 Crew)																		
Truck, Flatbed, w/ Boom, 5 Ton	300	Diesel	1	40	4.00	40.00	On-Road E.F.	0.00126	0.05059	0.00101	0.01054	0.42171	0.00843	0.00003	3.47481	138.99252	2.77985	0.00000	0.00000	0.00000	138.99252	2.77985
<TOTAL> [9]								9.90	0.39		4.85	0.21			3,515.13	152.15		0.00	0.00		3,515.13	152.15
Single Highest lbs/day Emissions for all Construction Phases [10]								4.90			2.97				1,807.63			0.00			1,807.63	

RTRP
Table A-5
Distribution Relocation
Criteria Air Pollutants GHG Tailpipe Emissions and Fugitive Dust Emissions from Vehicles Traveling on Paved and Unpaved Roads--UNMITIGATED

RTP Distribution Relocation Project				Emission Estimation Methodology		Carbon Monoxide (CO)		Nitrogen Oxides (NOx)		Sulfur Dioxide (SO2)		Particulate Matter less than 10 Microns (PM10) [5]		Particulate Matter less than 2.5 Microns (PM2.5) [5]		Volatile Organic Compound (VOC)		Carbon Dioxide (CO2)		Methane (CH4)		Carbon Dioxide Equivalent (CO2e) [6]				
Primary Emission Description	Hours per Day	Full Time	Primary Emission Quantity	Estimated Activity Schedule (days)	Estimated Equipment Usage Time (hr/day)	Estimated Exhaust Miles Per Day (mi)	Emission Factor (lb/hr or lb/mi)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mi)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mi)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mi)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mi)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mi)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)		
Off																										
Truck Truck, 4x4 (Foreman Truck)	300	Gas	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Backhoe/Tractor Loader	175	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Truck Truck, 4x4 (Foreman Truck)	300	Gas	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Compaction Roller	25	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Water Truck (Delivery)	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Water Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0004	0.0000	0.0001	0.0009	0.0000	1.0206	48.9183	0.5626
Generator Truck	350	Diesel	1	23	8.00	30.00	0.0002	0.0005	0.0001	0.0006	0.0025	0.0003	0.0000	0.0000	0.0000	0.0002	0.0007	0.0								

Notes:

- [1] Data provided by SCE.
- [2] Distance traveled is assumed to be 30 miles for delivery trucks and 40 miles for trailers.
- [3] <http://www.epa.gov/air/aqa/aqaonline/online/online.cfm>
- [4] <http://www.epa.gov/air/aqa/aqaonline/online/online.cfm> and <http://www.epa.gov/air/aqa/aqaonline/online/online.cfm>
- [5] For off-highway equipment, the emission factor was used to calculate the emissions of the equipment, respectively, for the year 2010.
- [6] The SCAGM demand equivalent was used to determine the SCAGM demand for off-highway construction equipment, 60 percent of the SCAGM demand.

[7] Carbon Dioxide Equivalent (CO₂e) assumes a GWP of 1 for CO₂ and 2 for CH₄, which were obtained from Table 3. Greenhouse Gas and Global Warming Potentials: Compendium of Green House Gas Emissions Methodologies for the Oil and Gas Industry dated February 2004 (API 2004).

[8] Greenhouse gas emissions were estimated assuming that one ton truck would drive the entire distance of the RTSP (2.14 miles) every two weeks as part of ongoing construction activities.

[9] Total Emissions were estimated to be the sum of all of the emission source types not including Occupational Maintenance.

[10] The emissions of the off-highway equipment were estimated by the off-highway equipment and the emissions of the construction equipment for any of the construction phases, construction phases with the highest daily emission was determined to be the total Construction & O&M Phase.

Additional notes with revision performed in November 2015:

A1 On Road E.F.s: except Sulfur Oxides and Carbon Dioxide (both retained from OFFROAD 2007), obtained from Data File Tables Appendix C of CuEiMed User's Guide (OFFROAD 2007).

A local factor (also obtained from the CuEiMed User's Guide Appendix D: Default Data Tables) was used in the calculation of the A1 E.F.s presented above.

A1 On Road E.F.s obtained using EMFAC2014 for fleet-wide average in Calendar Year 2020 (see table at right named "EMFAC2014_SortOnRoad"). As factors for methane emissions were not readily available from EMFAC2014, and were shown to be at least several orders of magnitude lower than those for CO₂ (on an equivalent basis), the estimation of methane emissions was removed from this quantitative analysis.

See left-most columns of Project Information updated to agree with updated version of the CuEiMed User's Guide (1/2016).

PM₁₀ emissions were estimated using guidance from SCAMOD - Methodology for Calculating PM₁₀ and PM_{2.5} Significance Thresholds 10/12/06.

$PM_{10} = \text{Fraction of } PM_{2.5} \text{ Diesel on-road emission} \times 0.9260$

Additional notes with revision performed in September 2016

The paved and unpaved travel distances for on-road vehicles during underground-related activities were estimated to be 29 miles and 1 mile,

[illegible]

RTDP
Table A-5
Distribution Relocation
Criteria Air Pollutants GHG Tailpipe Emissions and Fugitive Dust Emissions from Vehicles Traveling on Paved and Unpaved Roads--MITIGATED

RTDP Distribution Relocation Project				Emission Methodology (14)	Carbon Monoxide (CO)			Nitrogen Oxides (NOx)			Sulfur Oxides (SOx)			Particulate Matter less than 10 Microns (PM10) (5)			Particulate Matter less than 2.5 Microns (PM2.5) (6)			Volatile Organic Compound (VOC)			Carbon Dioxide (CO2)			Methane (CH4)			Carbon Dioxide Equivalent (CO2e) (15)		
Primary Equipment Description (8)	Horoscope (9)	Fuel Type (10)	Primary Equipment Quantity		Estimated Activity Schedule (days) (11)	Estimated Equipment Usage Time (hr/day) (12)	Estimated Distance Traveled (Miles Per Day) (13)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/hr or lb/mile)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)
Civil																															
1-Ton Truck, 44 (Foreman Truck)	300	Gas	1	23	8.00	30.00	On-Road E.F.	0.0002	0.0006	0.0011	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0001	0.0003	0.0000	0.0001	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Backhoe/Trencher/Loader	350	Diesel	1	23	8.00	30.00	On-Road E.F.	0.0012	0.0036	0.0067	0.0005	0.0015	0.0028	0.0008	0.0024	0.0004	0.0012	0.0003	0.0009	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Bulldozer	350	Diesel	1	23	8.00	30.00	On-Road E.F.	0.0013	0.0039	0.0074	0.0005	0.0015	0.0028	0.0008	0.0024	0.0004	0.0012	0.0003	0.0009	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Compactor Roller	350	Diesel	1	23	8.00	30.00	On-Road E.F.	0.0009	0.0027	0.0051	0.0003	0.0009	0.0017	0.0006	0.0018	0.0001	0.0003	0.0000	0.0002	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Limbo/Trip/Filler (Delivery)	450	Diesel	1	23	8.00	30.00	On-Road E.F.	0.0013	0.0039	0.0074	0.0005	0.0015	0.0028	0.0008	0.0024	0.0004	0.0012	0.0003	0.0009	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water Truck	350	Diesel	1	23	8.00	30.00	On-Road E.F.	0.0013	0.0039	0.0074	0.0005	0.0015	0.0028	0.0008	0.0024	0.0004	0.0012	0.0003	0.0009	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Concrete Truck	350	Diesel	1	23	8.00	30.00	On-Road E.F.	0.0013	0.0039	0.0074	0.0005	0.0015	0.0028	0.0008	0.0024	0.0004	0.0012	0.0003	0.0009	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker Vehicle	350	Gas	7	23		40.00	On-Road E.F.	0.0012	0.0036	0.0067	0.0005	0.0015	0.0028	0.0008	0.0024	0.0004	0.0012	0.0003	0.0009	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SubTOTAL ¹⁴								4.29	0.06		0.01	0.04		0.00	0.06		0.17	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Electrical																															
1-Ton Truck, 44 (Foreman Truck)	300	Gas	1	51	8.00	30.00	On-Road E.F.	0.0002	0.0006	0.0012	0.0000	0.0000	0.0000	0.0002	0.0007	0.0001	0.0001	0.0003	0.0000	0.0001	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Backhoe/Trencher/Loader	350	Diesel	1	51	8.00	30.00	On-Road E.F.	0.0012	0.0036	0.0069	0.0005	0.0015	0.0028	0.0008	0.0024	0.0004	0.0012	0.0003	0.0009	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cable Dolly/Truck	350	Diesel	1	51	8.00	30.00	On-Road E.F.	0.0013	0.0039	0.0075	0.0005	0.0015	0.0028	0.0008	0.0024	0.0004	0.0012	0.0003	0.0009	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Back Truck	350	Diesel	1	51	8.00	30.00	On-Road E.F.	0.0013	0.0039	0.0075	0.0005	0.0015	0.0028	0.0008	0.0024	0.0004	0.0012	0.0003	0.0009	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Line Truck	350	Diesel	1	51	8.00	30.00	On-Road E.F.	0.0013	0.0039	0.0075	0.0005	0.0015	0.0028	0.0008	0.0024	0.0004	0.0012	0.0003	0.0009	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Backhoe/Trencher	350	Diesel	1	51	8.00	30.00	On-Road E.F.	0.0012	0.0036	0.0069	0.0005	0.0015	0.0028	0.0008	0.0024	0.0004	0.0012	0.0003	0.0009	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Troubleshoot Truck	350	Diesel	1	51	8.00	30.00	On-Road E.F.	0.0013	0.0039	0.0075	0.0005	0.0015	0.0028	0.0008	0.0024	0.0004	0.0012	0.0003	0.0009	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker Vehicle	350	Diesel	1	51	8.00	30.00	On-Road E.F.	0.0013	0.0039	0.0075	0.0005	0.0015	0.0028	0.0008	0.0024	0.0004	0.0012	0.0003	0.0009	0.0000	0.0008	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SubTOTAL ¹⁴								0.86	0.02		0.01	0.00		0.12	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
<TOTAL> ⁽¹⁴⁾									4.95	0.07		0.02	0.13		0.23	0.00		0.28	0.00		2.215.69	39.16		0.00	0.00	2.215.69	39.16				
Single Highest 15-day Emissions for all Construction Phases ⁽¹⁵⁾									4.29			0.01			0.12			0.17			2.238.33				1.238.33						

Notes:
[1] Data provided by SCE.
[2] Distance traveled is assumed to be: 30 miles for delivery trucks and 40 miles contractors.
[3] Emission factors for on-road and off-road vehicles are obtained from EPA's Greenhouse Gas and Global Warming Potential (GWAP) calculator.
[4] For off-road equipment, PM emission factor was used to calculate PM10 emissions.
[5] EPA's Greenhouse Gas and Global Warming Potential (GWAP) calculator was used to calculate PM10 emissions.
[6] EPA's Greenhouse Gas and Global Warming Potential (GWAP) calculator was used to calculate PM2.5 emissions.
[7] Carbon Dioxide Equivalent (CO2e) assumes a GWP of 1 for CO2 and 25 for CH4, which were obtained from Table 3-1 Greenhouse Gas and Global Warming Potential (GWAP) calculator.
[8] For off-road equipment, PM emission factor was used to calculate PM10 emissions.
[9] EPA's Greenhouse Gas and Global Warming Potential (GWAP) calculator was used to calculate PM10 emissions.
[10] EPA's Greenhouse Gas and Global Warming Potential (GWAP) calculator was used to calculate PM2.5 emissions.
[11] EPA's Greenhouse Gas and Global Warming Potential (GWAP) calculator was used to calculate PM10 emissions.
[12] EPA's Greenhouse Gas and Global Warming Potential (GWAP) calculator was used to calculate PM2.5 emissions.
[13] EPA's Greenhouse Gas and Global Warming Potential (GWAP) calculator was used to calculate PM10 emissions.
[14] EPA's Greenhouse Gas and Global Warming Potential (GWAP) calculator was used to calculate PM2.5 emissions.
[15] EPA's Greenhouse Gas and Global Warming Potential (GWAP) calculator was used to calculate PM10 emissions.

Length of Paved Roads (miles)	Length of Unpaved Roads (miles)	Fugitive PM10 Emissions (Travel Over Paved Roads)			Fugitive PM2.5 Emissions (Travel Over Paved Roads)			Fugitive PM10 Emissions (Travel Over Unpaved Roads)			Fugitive PM2.5 Emissions (Travel Over Unpaved Roads)		
		Emission Factor (lb/MT)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/MT)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/MT)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)	Emission Factor (lb/MT)	Pound Per Day Emissions (lb/day)	Total Emissions (Tons)
25.21	4.73	0.00074	0.00422	0.00003	0.00083	0.00152	0.00002	1.89060	0.04256	0.00284	0.18996	0.08426	0.00208
25.21	4.73	0.00074	0.00422	0.00003	0.00083	0.00152	0.00002	1.89060	0.04256	0.00284	0.18996	0.08426	0.00208
25.21	4.73	0.00074	0.00422	0.00003	0.00083	0.00152	0.00002	1.89060	0.04256	0.00284	0.18996	0.08426	0.00208
25.21	4.73	0.00074	0.00422	0.00003	0.00083	0.00152	0.00002	1.89060	0.04256	0.00284	0.18996	0.08426	0.00208
25.21	4.73	0.00074	0.00422	0.00003	0.00083	0.00152	0.00002	1.89060	0.04256	0.00284	0.18996	0.08426	0.00208
25.21	4.73	0.00074	0.00422	0.00003	0.00083	0.00152	0.00002	1.89060	0.04256	0.00284	0.18996	0.08426	0.00208
25.21	4.73	0.00074	0.00422	0.00003	0.00083	0.00152	0.00002	1.89060	0.04256	0.00284	0.18996	0.08426	0.00208
40.00		0.00144	0.00796	0.00004	0.00160	0.00300	0.00001	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
			3.82	0.03		0.36	0.00		44.71	0.51		4.47	0.05
25.21	4.73	0.00074	0.00422	0.00003	0.00083	0.00152	0.00002	1.89060	0.04256	0.00284	0.18996	0.08426	0.00208
25.21	4.73	0.00074	0.00422	0.00003	0.00083	0.00152	0.00002	1.89060	0.04256	0.00284	0.18996	0.08426	0.00208
25.21	4.73	0.00074	0.00422	0.00003	0.00083	0.00152	0.00002	1.89060	0.04256	0.00284	0.18996	0.08426	0.00208
25.21	4.73	0.00074	0.00422	0.00003	0.00083	0.00152	0.00002	1.89060	0.04256	0.00284	0.18996	0.08426	0.00208
25.21	4.73	0.00074	0.00422	0.00003	0.00083	0.00152	0.00002	1.89060	0.04256	0.00284	0.18996	0.08426	0.00208
25.21	4.73	0.00074	0.00422	0.00003	0.00083	0.00152	0.00002	1.89060	0.04256	0.00284	0.18996	0.08426	0.00208
40.00		0.00144	0.00796	0.00004	0.00160	0.00300	0.00001	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
			7.10	0.14		0.86	0.02		107.31	2.11		10.73	0.21
			4.07			0.50			62.60			6.26	

RTRP
Table A-7
Fugitive Dust Emissions from Earthmoving Activities (Underground Hybrid 230 kV, Wilderness Substation and Distribution Relocation)--UNMITIGATED

Project Feature	Site Quantity	Disturbed Acreage Calculation (L x W)	Total Acres Disturbed During Construction	Total Acres to be Restored	Total Acres Permanently Disturbed	Maximum Acres Disturbed During Construction (acres/day)	PM ₁₀ Emission Factor (ton/acre-month) (2)	PM ₁₀ emissions, SCAQMD (lb/day) (3)	PM _{2.5} emissions, SCAQMD (lb/day) (3)
Underground Hybrid - I-15 230kV Route (1)									
Guard Structures	14	100' x 50'	1.6	1.6	0.0	0.11	0.22	2.53	0.53
Construct Lattice Steel Towers (4)	12	200' x 200'	11.0	8.6	2.4	0.92	0.22	20.20	4.24
Construct New Tubular Steel Poles (5)	47	200' x 100'	21.6	18.8	2.8	0.46	0.22	10.10	2.12
Construct New Tubular Steel Riser Pole (5)	4	200' x 200'	3.7	3.4	0.3	0.92	0.22	20.20	4.24
Modify Existing Lattice Steel Tower (6)	1	200' x 200'	0.9	0.9	0.0	0.92	0.22	20.20	4.24
220kV Conductor & OPGW Stringing Setup Area - Puller (7)	11	300' x 100'	7.6	7.6	0.0	0.69	0.22	15.15	3.18
220kV Conductor & OPGW Stringing Setup Area - Tensioner (7)	11	400' x 100'	10.1	10.1	0.0	0.92	0.22	20.20	4.24
220kV Conductor Field Splice Area (8)	2	50' x 50'	0.1	0.1	0.0	0.06	0.22	1.26	0.27
New Roads (Downline, Access, & Spur) (9)	4.1	linear miles x 18' wide	8.9	0.0	8.9	1.09	0.22	24.00	5.04
Install Underground Vault	32	150' x 100'	11.0	11.0	0.03	0.34	0.22	7.58	1.59
Install Underground Conduit Bank	22,000	linear feet x 30' wide	15.2	15.2	0.0	0.18	0.22	3.92	0.82
Yard-1 - Material & Equipment Staging Area (10)	1	15 acres	n/a	n/a	0.0	n/a	n/a	n/a	n/a
Yard-2 - Material & Equipment Staging Area (10)	1	5.5 acres	n/a	n/a	0.0	n/a	n/a	n/a	n/a
<SUBTOTAL> Total Estimated Disturbance Acreage (11)			91.7	77.3	14.4			24.00	5.04
<MAXIMUM> (lb/day)									

Project Feature	Site Quantity	Disturbed Acreage Calculation (L x W)	Total Acres Disturbed During Construction	Maximum Acres Disturbed During Construction (acres/day)	Acres Disturbed During Construction (acres/ month)	PM ₁₀ Emission Factor (ton/acre-month) ²	Duration of Project (days)	Duration of Project (months) ³	Total PM ₁₀ emissions (tons)	PM ₁₀ emissions, SCAQMD (lb/day)	PM ₁₀ emissions, SCAQMD (ton/yr)	PM _{2.5} emissions, SCAQMD (lb/day)	PM _{2.5} emissions, SCAQMD (ton/yr)
Wilderness Substation													
Grading	1	900' x 750'	15.5	0.12	2.5	0.22	125	6.3	3.41	54.55	3.4	11.5	0.7
<SUBTOTAL>										54.55		11.45	
<MAXIMUM> (lb/day)													

Project Feature	Site Quantity	Disturbed Acreage Calculation (L x W)	Total Acres Disturbed During Construction	Maximum Acres Disturbed During Construction (acres/day)	Acres Disturbed During Construction (acres/ month)	PM ₁₀ Emission Factor (ton/acre-month) ²	Duration of Project (days)	Duration of Project (months) ³	Total PM ₁₀ emissions (tons)	PM ₁₀ emissions, SCAQMD (lb/day)	PM ₁₀ emissions, SCAQMD (ton/yr)	PM _{2.5} emissions, SCAQMD (lb/day)	PM _{2.5} emissions, SCAQMD (ton/yr)
Distribution Relocation													
Trench (Location 1)	1	2311' x 32'	1.7	0.07	1.5	0.22	23	1.2	0.37	32.48	0.4	6.8	0.1
<SUBTOTAL>										32.48		6.82	
<MAXIMUM> (lb/day)													

Notes:

1. Data from RTRP - Revised Table 2.5-3a. Land Disturbance Estimates (RTRP Table 2 5-3a Land Disturbance 16-1108 v1.pdf)
2. The CARB document cites that the emission factor is for site preparation work, which may include scraping, grading, loading, digging, compacting, light-duty vehicle travel, and other operations. <http://www.arb.ca.gov/ei/areasrc/ONEHTM/ONE7-7.HTM>
3. Assumes 20 work days per month.
4. Includes foundation installation, structure assembly & erection, conductor & OPGW installation; area to be restored after construction, portion of R/W within 25' of the Lattice Steel Tower to remain cleared of vegetation, approximately 0.2 acres would be permanently disturbed for each LST.
5. Includes foundation installation, structure assembly & erection, conductor & OPGW installation; area to be restored after construction, portion of R/W within 25' of the Tubular Steel Pole to remain cleared of vegetation, approximately 0.06 acres would be permanently disturbed for each TSP.
6. Includes structure modification & assembly, and OPGW installation; area to be restored after construction, existing portion of R/W within 25' of the Lattice Steel Tower footings to remain cleared of vegetation; this struture has pre-existing permanently disturbed area for ongoing O&M access by SCE.
7. Based on 9,000' conductor reel lengths, number of circuits, and route design.

RTRP
Table A-7

Fugitive Dust Emissions from Earthmoving Activities (Underground Hybrid 230 kV, Wilderness Substation and Distribution Relocation)--UNMITIGATED

8. Includes anchoring and dead-end hardware and/or equipment needed to temporarily secure conductor wire to the correct tension.

9. Based on length of road in miles x road width of 14' with 2' of shoulder on each side of road.

10. Material/Staging yards are located in previously disturbed areas.

11. The disturbed acreage calculations are estimates based upon SCE's preferred area of use for the described project feature, the width of the existing right-of-way, or the width of the proposed right-of-way; they are subject to revision based upon final engineering and review of the project by SCE's Construction Manager and/or Contractor awarded project.

RTRP
Table A-8
Fugitive Dust Emissions from Earthmoving Activities Underground Hybrid 230 kV, Wilderness Substation and Distribution Relocation)--MITIGATED

Project Feature	Site Quantity	Disturbed Acreage Calculation (L x W)	Total Acres Disturbed During Construction	Total Acres to be Restored	Total Acres Permanently Disturbed	Maximum Acres Disturbed During Construction (acres/day)	PM ₁₀ Emission Factor (ton/acre-month) (2)	PM ₁₀ emissions, SCAQMD (lb/day) (3)	PM2.5 emissions, SCAQMD (lb/day) (3)
Underground Hybrid - I-15 230kV Route (1)									
Guard Structures	14	100' x 50'	1.6	1.6	0.0	0.11	0.11	1.26	0.27
Construct Lattice Steel Towers (4)	12	200' x 200'	11.0	8.6	2.4	0.92	0.11	10.10	2.12
Construct New Tubular Steel Poles (5)	47	200' x 100'	21.6	18.8	2.8	0.46	0.11	5.05	1.06
Construct New Tubular Steel Riser Pole (5)	4	200' x 200'	3.7	3.4	0.3	0.92	0.11	10.10	2.12
Modify Existing Lattice Steel Tower (6)	1	200' x 200'	0.9	0.9	0.0	0.92	0.11	10.10	2.12
220kV Conductor & OPGW Stringing Setup Area - Puller (7)	11	300' x 100'	7.6	7.6	0.0	0.69	0.11	7.58	1.59
220kV Conductor & OPGW Stringing Setup Area - Tensioner (7)	11	400' x 100'	10.1	10.1	0.0	0.92	0.11	10.10	2.12
220kV Conductor Field Splice Area (8)	2	50' x 50'	0.1	0.1	0.0	0.06	0.11	0.63	0.13
New Roads (Downline, Access, & Spur) (9)	4.1	linear miles x 18' wide	8.9	0.0	8.9	1.09	0.11	11.99	2.52
Install Underground Vault	32	150' x 100'	11.0	11.0	0.03	0.34	0.11	3.79	0.80
Install Underground Conduit Bank	22,000	linear feet x 30' wide	15.2	15.2	0.0	0.18	0.11	1.96	0.41
Yard-1 - Material & Equipment Staging Area (10)	1	15 acres	n/a	n/a	0.0	n/a	n/a	n/a	n/a
Yard-2 - Material & Equipment Staging Area (10)	1	5.5 acres	n/a	n/a	0.0	n/a	n/a	n/a	n/a
<SUBTOTAL> Total Estimated Disturbance Acreage (11)			91.7	77.3	14.4			11.99	2.52
<MAXIMUM> (lb/day)									

Project Feature	Site Quantity	Disturbed Acreage Calculation (L x W)	Total Acres Disturbed During Construction	Maximum Acres Disturbed During Construction (acres/day)	Acres Disturbed During Construction (acres/ month)	PM ₁₀ Emission Factor (ton/acre-month) ²	Duration of Project (days)	Duration of Project (months) ³	Total PM ₁₀ emissions (tons)	PM ₁₀ emissions, SCAQMD (lb/day)	PM ₁₀ emissions, SCAQMD (ton/yr)	PM2.5 emissions, SCAQMD (lb/day)	PM2.5 emissions, SCAQMD (ton/yr)
Wilderness Substation													
Grading	1	900' x 750'	15.5	0.12	2.5	0.11	125	6.3	1.70	27.27	1.7	5.7	0.4
<SUBTOTAL>										27.27		5.73	
<MAXIMUM> (lb/day)													

Project Feature	Site Quantity	Disturbed Acreage Calculation (L x W)	Total Acres Disturbed During Construction	Maximum Acres Disturbed During Construction (acres/day)	Acres Disturbed During Construction (acres/ month)	PM ₁₀ Emission Factor (ton/acre-month) ²	Duration of Project (days)	Duration of Project (months) ³	Total PM ₁₀ emissions (tons)	PM ₁₀ emissions, SCAQMD (lb/day)	PM ₁₀ emissions, SCAQMD (ton/yr)	PM2.5 emissions, SCAQMD (lb/day)	PM2.5 emissions, SCAQMD (ton/yr)
Distribution Relocation													
Trench (Location 1)	1	2311' x 32'	1.7	0.07	1.5	0.11	23	1.2	0.19	16.24	0.2	3.4	0.0
<SUBTOTAL>										16.24		3.41	
<MAXIMUM> (lb/day)													

Notes:

1. Data from RTRP - Revised Table 2.5-3a. Land Disturbance Estimates (RTRP Table 2 5-3a Land Disturbance 16-1108 v1.pdf)

2. The CARB document cites that the emission factor is for site preparation work, which may include scraping, grading, loading, digging, compacting, light-duty vehicle travel, and other operations. <http://www.arb.ca.gov/ei/areasrc/ONEHTM/ONE7-7.HTM>

3. Assumes 20 work days per month.

4. Includes foundation installation, structure assembly & erection, conductor & OPGW installation; area to be restored after construction, portion of R/W within 25' of the Lattice Steel Tower to remain cleared of vegetation, approximately 0.2 acres would be permanently disturbed for each LST.

5. Includes foundation installation, structure assembly & erection, conductor & OPGW installation; area to be restored after construction, portion of R/W within 25' of the Tubular Steel Pole to remain cleared of vegetation, approximately 0.06 acres would be permanently disturbed for each TSP.

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Table A-8

Fugitive Dust Emissions from Earthmoving Activities Underground Hybrid 230 kV, Wilderness Substation and Distribution Relocation)--MITIGATED

6. Includes structure modification & assembly, and OPGW installation; area to be restored after construction, existing portion of R/W within 25' of the Lattice Steel Tower footings to remain cleared of vegetation; this struture has pre-existing permanently disturbed area for ongoing O&M access by SCE.
7. Based on 9,000' conductor reel lengths, number of circuits, and route design.
8. Includes anchoring and dead-end hardware and/or equipment needed to temporarily secure conductor wire to the correct tension.
9. Based on length of road in miles x road width of 14' with 2' of shoulder on each side of road.
10. Material/Staging yards are located in previously disturbed areas.
11. The disturbed acreage calculations are estimates based upon SCE's preferred area of use for the described project feature, the width of the existing right-of-way, or the width of the proposed right-of-way; they are subject to revision based upon final engineering and review of the project by SCE's Construction Manager and/or Contractor awarded project.

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Table A-9

Distribution Relocation--Construction Equipment Usage and Duration

Activity	# of Work Days	Equipment	Duration of Use (hours)	Fuel Type
Civil	23	Backhoe	8	Diesel
		Dump Truck	8	Diesel
		Roller	8	Diesel
		Delivery Truck	8	Diesel
		Water Truck	8	Diesel
		Cement Truck	8	Diesel
		Foreman Truck	8	Gasoline
Electrical	51	Rodder Truck	8	Diesel
		Cable Dolly	8	Diesel
		Reel Truck	8	Diesel
		Line Truck	8	Diesel
		Boom Truck	8	Diesel
		Troubleman Truck	8	Diesel
		Foreman Truck	8	Gasoline

RTRP
Table A-10
Distribution Relocation--Construction Disturbance Calculations

RTRP Distribution Relocation

Location		Detail	Qty	L (ft)	W (ft)	D (ft)	ft^3	Volume yds^3	Area ft^2
1	Trench	2450 ft							
		Volume	1	2401	2	4	19208	711	
		Area	1	2311	32				73952
	Vaults	(2) 7'x14'x8', (1) 6'x12'x8'							
		Volume	2	17	10	12	4080	151	
		Volume	1	15	9	12	1620	60	
		Area	2	47	40				3760
		Area	1	45	39				1755
2	Pole Removal								
		Area	2	25	30				1500
3	Trench	450 ft							
		Volume	1	435	2	4	3480	129	
		Area	1	405	32				12960
	Vaults	(1) 6'x12'x8'							
		Volume	1	15	9	12	1620	60	
		Area	1	45	39				1755
	Pole Removal								
		Area	2	25	30				1500
4	Pole Removal								
		Area	1	25	30				750
5	Trench	600 ft							
		Volume	1	558	2	4.5	5022	186	
		Area	1	498	32				15936
	Vaults								
		Volume	2	21	10	12	5040	187	
		Area	2	51	40				4080
	Pole Installation								
		Volume	2		2	5	20	0.74	
		Area	2	25	30				1500
	Pole Removal								
		Area	6	25	30				4500
6	Pole Installation								
		Volume	5		2	5	50	1.85	
		Area	5	25	30				3750
	Pole Removal								
		Area	5	25	30				3750
7	Pole Installation								
		Volume	3		2	5	30	1.11	
		Area	3	25	30				2250
	Pole Removal								
		Area	2	25	30				1500
8	Trench	500 ft							
		Volume	1	485	2	4.5	4365	162	
		Area	1	455	32				14560
	Vaults	(1) 6'x12'x8'							
		Volume	1	15	9	12	1620	60	
		Area	1	45	39				1755
	Pole Installation								
		Volume	4		2	5	40	1.48	
		Area	4	25	30				3000
	Pole Removal								
		Area	5	25	30				3750

Total Volume	1711	yds^3
Total Area	158263	ft^2
	3.63	acres

Data obtained from Appendix D Default Data Tables from CalEEMod User's Guide

Equipment Type	Year			TOG	ROG	CO	NOX	SO2	PM10	PM2.5	CO2	CH4
		Low HP	High HP	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)
Aerial Lifts	2020	6	15	0.199447	0.1676	3.09942	2.95486	0.0054	0.0309	0.0284	525.0743	0.1698
Aerial Lifts	2020	16	25	0.199447	0.1676	3.09942	2.95486	0.0054	0.0309	0.0284	525.0743	0.1698
Aerial Lifts	2020	26	50	0.199447	0.1676	3.09942	2.95486	0.0054	0.0309	0.0284	525.0743	0.1698
Aerial Lifts	2020	51	120	0.136778	0.1149	3.1768	1.86859	0.0049	0.0416	0.0382	472.1142	0.1527
Aerial Lifts	2020	251	500	0.081859	0.0688	0.94623	0.63803	0.0049	0.009	0.0083	472.0545	0.1527
Aerial Lifts	2020	501	750	26.846	0.2	1.013	1.868	0.005	0.057	0.057	568.299	0.018
Air Compressors	2020	6	15	1.907	0.731	3.546	4.542	0.008	0.227	0.227	568.299	0.066
Air Compressors	2020	16	25	4.009	0.769	2.473	4.538	0.007	0.212	0.212	568.3	0.069
Air Compressors	2020	26	50	8.048	1.001	5.164	4.397	0.007	0.25	0.25	568.299	0.09
Air Compressors	2020	51	120	8.287	0.489	3.698	3.4	0.006	0.224	0.224	568.299	0.044
Air Compressors	2020	121	175	11.957	0.374	3.203	2.558	0.006	0.133	0.133	568.299	0.033
Air Compressors	2020	176	250	13.668	0.288	1.121	2.172	0.006	0.069	0.069	568.299	0.026
Air Compressors	2020	251	500	23.406	0.279	1.076	1.935	0.005	0.067	0.067	568.299	0.025
Air Compressors	2020	501	750	36.303	0.28	1.076	1.982	0.005	0.067	0.067	568.299	0.025
Air Compressors	2020	751	1000	53.87	0.306	1.158	3.828	0.005	0.093	0.093	568.3	0.027
Bore/Drill Rigs	2020	6	15	0.851825	0.7158	4.51013	4.6451	0.0055	0.2941	0.2706	535.2948	0.1731
Bore/Drill Rigs	2020	16	25	0.851825	0.7158	4.51013	4.6451	0.0055	0.2941	0.2706	535.2948	0.1731
Bore/Drill Rigs	2020	26	50	0.851825	0.7158	4.51013	4.6451	0.0055	0.2941	0.2706	535.2948	0.1731
Bore/Drill Rigs	2020	51	120	0.292949	0.2462	3.32347	3.06601	0.0048	0.1586	0.1459	463.5827	0.1499
Bore/Drill Rigs	2020	121	175	0.207426	0.1743	2.96948	1.87149	0.0049	0.0822	0.0757	477.722	0.1545
Bore/Drill Rigs	2020	176	250	0.169462	0.1424	1.06766	1.80732	0.0048	0.0521	0.0479	466.8342	0.151
Bore/Drill Rigs	2020	251	500	0.148188	0.1245	1.01263	1.40938	0.0048	0.0446	0.041	466.8219	0.151
Bore/Drill Rigs	2020	501	750	0.129293	0.1086	0.97413	1.23085	0.0049	0.0409	0.0377	473.6679	0.1532
Bore/Drill Rigs	2020	751	1000	0.158163	0.1329	0.98839	3.05008	0.0049	0.0612	0.0563	471.8492	0.1526
Cement and Mortar Mixers	2020	6	15	1.075	0.661	3.47	4.142	0.008	0.161	0.161	568.299	0.059
Cement and Mortar Mixers	2020	16	25	3.265	0.723	2.397	4.442	0.007	0.187	0.187	568.299	0.065
Concrete/Industrial Saws	2020	16	25	1.532	0.685	2.339	4.332	0.007	0.161	0.161	568.299	0.061
Concrete/Industrial Saws	2020	26	50	3.271	0.798	4.552	4.196	0.007	0.212	0.212	568.299	0.072
Concrete/Industrial Saws	2020	51	120	4.042	0.401	3.535	3.163	0.006	0.19	0.19	568.299	0.036
Concrete/Industrial Saws	2020	121	175	6.669	0.306	3.072	2.324	0.006	0.114	0.114	568.299	0.027
Cranes	2020	26	50	2.47956	2.0835	7.37625	5.98471	0.0053	0.6237	0.5738	517.9263	0.1675
Cranes	2020	51	120	0.871016	0.7319	4.17141	6.38117	0.0048	0.4529	0.4167	469.8821	0.152
Cranes	2020	121	175	0.638941	0.5369	3.56232	5.5697	0.0049	0.2978	0.274	474.5939	0.1535
Cranes	2020	176	250	0.45669	0.3837	1.7904	4.56329	0.0049	0.1881	0.1731	472.9488	0.153
Cranes	2020	251	500	0.381547	0.3206	2.66037	3.86243	0.0049	0.1548	0.1424	472.5579	0.1528
Cranes	2020	501	750	0.287724	0.2418	1.44353	3.10471	0.0049	0.116	0.1067	470.4254	0.1521
Cranes	2020	1001	9999	0.216797	0.1822	0.99943	2.3614	0.0049	0.0604	0.0556	472.0545	0.1527
Crawler Tractors	2020	26	50	2.443056	2.0528	7.3	5.64276	0.0053	0.5912	0.5439	515.679	0.1668
Crawler Tractors	2020	51	120	0.850709	0.7148	4.04412	6.00933	0.0049	0.5005	0.4604	476.3284	0.1541
Crawler Tractors	2020	121	175	0.566576	0.4761	3.33989	4.87226	0.0049	0.2722	0.2504	471.015	0.1523
Crawler Tractors	2020	176	250	0.428471	0.36	1.55491	4.63225	0.0049	0.1746	0.1606	472.941	0.153
Crawler Tractors	2020	251	500	0.358593	0.3013	2.0875	3.62175	0.0049	0.1409	0.1296	475.2338	0.1537
Crawler Tractors	2020	501	750	0.304872	0.2562	1.31018	3.13716	0.0049	0.1151	0.1059	473.3119	0.1531
Crawler Tractors	2020	751	1000	0.551035	0.463	2.02764	7.23682	0.0049	0.212	0.195	475.6525	0.1538
Crushing/Proc. Equipment	2020	26	50	2.489	0.947	5.211	4.347	0.007	0.233	0.233	568.299	0.085
Crushing/Proc. Equipment	2020	51	120	2.348	0.473	3.722	3.249	0.006	0.206	0.206	568.299	0.042
Crushing/Proc. Equipment	2020	121	175	3.673	0.367	3.234	2.392	0.006	0.124	0.124	568.299	0.033
Crushing/Proc. Equipment	2020	176	250	4.222	0.289	1.125	2.014	0.006	0.065	0.065	568.299	0.026
Crushing/Proc. Equipment	2020	251	500	6.283	0.281	1.078	1.799	0.005	0.063	0.063	568.299	0.025
Crushing/Proc. Equipment	2020	501	750	9.884	0.281	1.077	1.835	0.005	0.063	0.063	568.299	0.025
Crushing/Proc. Equipment	2020	1001	9999	25.755	0.329	1.153	3.699	0.005	0.089	0.089	568.299	0.029
Dumpers/Tenders	2020	16	25	0.819	0.685	2.339	4.336	0.007	0.165	0.165	568.299	0.061
Excavators	2020	16	25	0.705964	0.5932	4.50032	4.03131	0.0054	0.2222	0.2044	525.3675	0.1699
Excavators	2020	26	50	0.705964	0.5932	4.50032	4.03131	0.0054	0.2222	0.2044	525.3675	0.1699
Excavators	2020	51	120	0.356064	0.2992	3.50495	3.08964	0.0048	0.1848	0.17	468.0546	0.1514
Excavators	2020	121	175	0.275327	0.2314	3.08597	2.27838	0.0049	0.1104	0.1015	472.2891	0.1527
Excavators	2020	176	250	0.211076	0.1774	1.11778	2.02738	0.0049	0.0614	0.0565	471.8828	0.1526
Excavators	2020	251	500	0.182542	0.1534	1.1016	1.57199	0.0049	0.0518	0.0476	470.2956	0.1521
Excavators	2020	501	750	0.202011	0.1697	1.14543	1.79718	0.0048	0.0612	0.0563	468.8706	0.1516
Forklifts	2020	26	50	1.337399	1.1238	5.70563	4.68572	0.0054	0.3601	0.3313	525.4833	0.17
Forklifts	2020	51	120	0.545921	0.4587	3.75954	4.13299	0.0049	0.3079	0.2833	471.5285	0.1525
Forklifts	2020	121	175	0.402357	0.3381	3.24885	3.3196	0.0049	0.1797	0.1653	472.1062	0.1527
Forklifts	2020	176	250	0.348476	0.2928	1.44178	3.24149	0.0049	0.1259	0.1158	473.3255	0.1531
Forklifts	2020	251	500	0.299035	0.2513	1.47807	2.43991	0.0049	0.0967	0.0889	473.6151	0.1532
Generator Sets	2020	6	15	1.715	0.646	3.546	4.516	0.008	0.212	0.212	568.299	0.058
Generator Sets	2020	16	25	3.307	0.721	2.473	4.538	0.007	0.205	0.205	568.299	0.065
Generator Sets	2020	26	50	5.508	0.691	3.995	4.075	0.007	0.194	0.194	568.299	0.062
Generator Sets	2020	51	120	7.383	0.364	3.38	3.173	0.006	0.179	0.179	568.299	0.032
Generator Sets	2020	121	175	9.884	0.267	2.93	2.38	0.006	0.105	0.105	568.299	0.024
Generator Sets	2020	176	250	10.963	0.198	1.026	2.016	0.006	0.057	0.057	568.299	0.017
Generator Sets	2020	251	500	16.528	0.188	1.005	1.816	0.005	0.055	0.055	568.299	0.017
Generator Sets	2020	501	750	27.045	0.191	1.005	1.858	0.005	0.056	0.056	568.299	0.017
Generator Sets	2020	1001	9999	66.08	0.242	1.082	3.608	0.005	0.079	0.079	568.3	0.021
Graders	2020	26	50	2.994737	2.5164	8.13394	5.82549	0.005	0.7086	0.6519	492.8615	0.1594
Graders	2020	51	120	1.161574	0.976	4.56142	7.72513	0.0048	0.622	0.5722	469.3371	0.1518
Graders	2020	121	175	0.674427	0.5667	3.62102	5.53045	0.0049	0.3085	0.2838	478.0403	0.1546
Graders	2020	176	250	0.41877	0.3519	1.34183	4.67787	0.0049	0.1495	0.1376	475.3037	0.1537
Graders	2020	251	500	0.383198	0.322	1.5256	3.10731	0.0049	0.1206	0.111	471.9795	0.1526
Graders	2020	501	750	12.961	0.319	1.229	2.031	0.005	0.072	0.072	568.299	0.028
Off-Highway Tractors	2020	51	120	0.533073	0.4479	3.78798	4.18317	0.0049	0.307	0.2825	474.1481	0.1533
Off-Highway Tractors	2020	121	175	0.322507	0.271	3.21511	2.89032	0.0049	0.1402	0.129	472.9169	0.153
Off-Highway Tractors	2020	176	250	0.263453	0.2214	1.1813	2.57547	0.0049	0.0862	0.0793	470.943	0.1523
Off-Highway Tractors	2020	501	750	0.239679	0.2014	1.13143	2.04663	0.0049	0.0762	0.0701	471.8151	0.1526
Off-Highway Tractors	2020	751	1000	0.178457	0.15	1.02156	2.39599	0.0049	0.063	0.058	472.0545	0.1527
Off-Highway Trucks	2020	121	175	0.36879	0.3099	3.3388	2.62769	0.0049	0.137	0.126	470.0967	0.152
Off-Highway Trucks	2020	176	250	0.327003	0.2748	1.39106	2.50726	0.0049	0.0977	0.0899	470.1675	0.1521

Off-Highway Trucks	2020	251	500	0.292906	0.2461	1.41417	2.34677	0.0049	0.0855	0.0787	474.5787	0.1535
Off-Highway Trucks	2020	501	750	0.371665	0.3123	2.02683	3.05816	0.0049	0.1196	0.11	472.7499	0.1529
Off-Highway Trucks	2020	751	1000	0.360605	0.303	1.37163	4.79365	0.0049	0.1252	0.1152	469.8892	0.152
Other Construction Equipment	2020	6	15	1.276029	1.0722	5.40446	5.03626	0.0054	0.4052	0.3728	527.9656	0.1708
Other Construction Equipment	2020	16	25	1.276029	1.0722	5.40446	5.03626	0.0054	0.4052	0.3728	527.9656	0.1708
Other Construction Equipment	2020	26	50	1.276029	1.0722	5.40446	5.03626	0.0054	0.4052	0.3728	527.9656	0.1708
Other Construction Equipment	2020	51	120	0.617777	0.5191	3.73189	4.7712	0.0049	0.3537	0.3254	472.2162	0.1527
Other Construction Equipment	2020	121	175	0.461441	0.3877	3.23528	4.11203	0.0049	0.217	0.1996	469.9837	0.152
Other Construction Equipment	2020	251	500	0.266788	0.2242	1.6338	2.63672	0.0049	0.096	0.0883	475.2326	0.1537
Other General Industrial Equipment	2020	6	15	1.125869	0.946	5.50397	4.62219	0.0054	0.334	0.3073	526.1761	0.1702
Other General Industrial Equipment	2020	16	25	1.125869	0.946	5.50397	4.62219	0.0054	0.334	0.3073	526.1761	0.1702
Other General Industrial Equipment	2020	26	50	1.125869	0.946	5.50397	4.62219	0.0054	0.334	0.3073	526.1761	0.1702
Other General Industrial Equipment	2020	51	120	0.53075	0.446	3.77073	4.06079	0.0048	0.2959	0.2722	469.9998	0.152
Other General Industrial Equipment	2020	121	175	0.319281	0.2683	3.22922	2.57503	0.0049	0.135	0.1242	471.8502	0.1526
Other General Industrial Equipment	2020	176	250	0.281815	0.2368	1.23914	2.66782	0.0049	0.0902	0.083	473.2231	0.153
Other General Industrial Equipment	2020	251	500	0.247036	0.2076	1.34424	2.06187	0.0049	0.0724	0.0666	472.929	0.153
Other General Industrial Equipment	2020	501	750	0.207847	0.1746	1.46184	1.67591	0.0049	0.0622	0.0572	473.4638	0.1531
Other General Industrial Equipment	2020	751	1000	0.322174	0.2707	1.085	4.85721	0.0049	0.1186	0.1092	472.0545	0.1527
Other Material Handling Equipment	2020	26	50	1.481858	1.2452	6.1671	5.13925	0.0054	0.4392	0.4041	523.7088	0.1694
Other Material Handling Equipment	2020	51	120	0.36479	0.3065	3.58938	3.10396	0.0049	0.1823	0.1677	473.5884	0.1532
Other Material Handling Equipment	2020	121	175	0.299922	0.252	3.17089	2.36653	0.0049	0.1181	0.1086	472.2193	0.1527
Other Material Handling Equipment	2020	176	250	0.346024	0.2908	1.31882	3.59889	0.0049	0.1152	0.106	471.482	0.1525
Other Material Handling Equipment	2020	251	500	0.336187	0.2825	1.52346	3.20974	0.0049	0.1198	0.1102	470.2972	0.1521
Other Material Handling Equipment	2020	1001	9999	0.238473	0.2004	1.04898	3.61407	0.0049	0.0783	0.072	472.0545	0.1527
Pavers	2020	16	25	1.568718	1.3182	5.52345	4.76401	0.0054	0.4022	0.37	526.2098	0.1702
Pavers	2020	26	50	1.568718	1.3182	5.52345	4.76401	0.0054	0.4022	0.37	526.2098	0.1702
Pavers	2020	51	120	0.558949	0.4697	3.60405	4.42718	0.0048	0.3249	0.2989	469.8815	0.152
Pavers	2020	121	175	0.324615	0.2728	3.0097	2.91833	0.0049	0.1419	0.1305	472.7746	0.1529
Pavers	2020	176	250	0.209036	0.1756	1.02834	2.77699	0.0049	0.076	0.0699	472.8337	0.1529
Pavers	2020	251	500	0.195949	0.1647	0.98677	2.13394	0.0048	0.0772	0.071	466.2059	0.1508
Paving Equipment	2020	16	25	0.73951	0.6214	4.22322	3.9519	0.0054	0.2169	0.1996	520.1235	0.1682
Paving Equipment	2020	26	50	0.73951	0.6214	4.22322	3.9519	0.0054	0.2169	0.1996	520.1235	0.1682
Paving Equipment	2020	51	120	0.472907	0.3974	3.58172	3.78064	0.0049	0.2558	0.2353	473.3249	0.1531
Paving Equipment	2020	121	175	0.294586	0.2475	3.02393	2.55498	0.0049	0.1278	0.1176	470.7359	0.1522
Paving Equipment	2020	176	250	0.289784	0.2435	1.25215	3.2202	0.0049	0.1107	0.1018	472.1514	0.1527
Plate Compactors	2020	6	15	0.79	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059
Pressure Washers	2020	6	15	1.78	0.646	3.546	4.516	0.008	0.212	0.212	568.299	0.058
Pressure Washers	2020	16	25	2.904	0.721	2.473	4.538	0.007	0.205	0.205	568.299	0.065
Pressure Washers	2020	26	50	4.025	0.499	3.393	3.917	0.007	0.161	0.161	568.299	0.045
Pressure Washers	2020	51	120	4.048	0.298	3.225	3.036	0.006	0.151	0.151	568.299	0.026
Pressure Washers	2020	121	175	16.638	0.258	2.907	2.383	0.006	0.104	0.104	568.299	0.023
Pressure Washers	2020	176	250	8.005	0.098	0.986	0.265	0.006	0.009	0.009	568.299	0.008
Pumps	2020	6	15	1.593	0.731	3.546	4.542	0.008	0.227	0.227	568.299	0.066
Pumps	2020	16	25	4.396	0.769	2.473	4.538	0.007	0.212	0.212	568.299	0.069
Pumps	2020	26	50	7.613	0.755	4.197	4.128	0.007	0.206	0.206	568.299	0.068
Pumps	2020	51	120	8.832	0.386	3.432	3.219	0.006	0.189	0.189	568.299	0.034
Pumps	2020	121	175	11.744	0.285	2.974	2.418	0.006	0.111	0.111	568.299	0.025
Pumps	2020	176	250	12.575	0.212	1.042	2.05	0.006	0.06	0.06	568.299	0.019
Pumps	2020	251	500	20.565	0.203	1.017	1.841	0.005	0.057	0.057	568.3	0.018
Pumps	2020	501	750	34.373	0.205	1.017	1.884	0.005	0.058	0.058	568.299	0.018
Pumps	2020	1001	9999	101.462	0.255	1.096	3.649	0.005	0.081	0.081	568.3	0.023
Rollers	2020	6	15	1.102095	0.9261	4.72504	4.53426	0.0054	0.3289	0.3026	525.8798	0.1701
Rollers	2020	16	25	1.102095	0.9261	4.72504	4.53426	0.0054	0.3289	0.3026	525.8798	0.1701
Rollers	2020	26	50	1.102095	0.9261	4.72504	4.53426	0.0054	0.3289	0.3026	525.8798	0.1701
Rollers	2020	51	120	0.462004	0.3882	3.53135	3.88153	0.0049	0.2475	0.2277	473.8594	0.1533
Rollers	2020	121	175	0.256128	0.2152	2.93333	2.45176	0.0049	0.1126	0.1036	471.9177	0.1526
Rollers	2020	176	250	0.248138	0.2085	1.25343	2.75095	0.0049	0.0892	0.082	473.3669	0.1531
Rollers	2020	251	500	0.279691	0.235	2.11346	2.82823	0.005	0.1094	0.1007	479.3254	0.155
Rough Terrain Forklifts	2020	26	50	1.188595	0.9987	4.68594	4.4946	0.0054	0.3164	0.2911	525.6222	0.17
Rough Terrain Forklifts	2020	51	120	0.225188	0.1892	3.25575	2.45218	0.0049	0.1026	0.0944	472.9842	0.153
Rough Terrain Forklifts	2020	121	175	0.170092	0.1429	2.84466	1.86888	0.0049	0.0684	0.0629	471.7152	0.1526
Rough Terrain Forklifts	2020	176	250	0.132727	0.1115	0.97848	1.60906	0.0049	0.0366	0.0337	472.5671	0.1528
Rough Terrain Forklifts	2020	251	500	0.105484	0.0886	0.94184	1.30199	0.0048	0.0281	0.0258	465.7709	0.1506
Rubber Tired Dozers	2020	121	175	0.864425	0.7264	3.89288	7.18525	0.0049	0.4107	0.3778	473.0116	0.153
Rubber Tired Dozers	2020	176	250	0.737248	0.6195	2.37104	6.50332	0.0049	0.3185	0.293	474.7928	0.1536
Rubber Tired Dozers	2020	251	500	0.636621	0.5349	4.41134	5.64089	0.0049	0.2591	0.2384	479.7569	0.1552
Rubber Tired Dozers	2020	501	750	0.543245	0.4565	2.60108	6.12255	0.0049	0.2181	0.2007	473.0562	0.153
Rubber Tired Dozers	2020	751	1000	7.811	0.522	2.164	5.306	0.005	0.16	0.16	568.299	0.047
Rubber Tired Loaders	2020	16	25	1.761913	1.4805	6.76793	5.25369	0.0054	0.4741	0.4362	524.6967	0.1697
Rubber Tired Loaders	2020	26	50	1.761913	1.4805	6.76793	5.25369	0.0054	0.4741	0.4362	524.6967	0.1697
Rubber Tired Loaders	2020	51	120	0.661113	0.5555	3.94839	4.68644	0.0048	0.367	0.3376	465.6735	0.1506
Rubber Tired Loaders	2020	121	175	0.450696	0.3787	3.36809	3.51735	0.0049	0.1936	0.1781	471.2135	0.1524
Rubber Tired Loaders	2020	176	250	0.345399	0.2902	1.26885	3.42116	0.0048	0.1136	0.1045	469.5127	0.1518
Rubber Tired Loaders	2020	251	500	0.343959	0.289	1.6304	3.01666	0.0048	0.1122	0.1032	466.7831	0.151
Rubber Tired Loaders	2020	501	750	0.329462	0.2768	1.39991	2.76722	0.0048	0.1075	0.0989	462.193	0.1495
Rubber Tired Loaders	2020	751	1000	0.370676	0.3115	1.20366	5.25309	0.0049	0.1385	0.1274	469.9352	0.152
Scrapers	2020	51	120	0.834143	0.7009	4.19756	6.6767	0.005	0.5101	0.4693	483.745	0.1565
Scrapers	2020	121	175	0.568453	0.4777	3.50114	4.86851	0.0049	0.262	0.241	478.6077	0.1548
Scrapers	2020	176	250	0.531032	0.4462	2.06469	5.089	0.0048	0.2232	0.2054	468.9883	0.1517
Scrapers	2020	251	500	0.380326	0.3196	2.40063	3.78254	0.0049	0.1475	0.1357	472.1751	0.1527
Scrapers	2020	501	750	0.311991	0.2622	1.72502	3.12592	0.0049	0.1132	0.1042	471.7776	0.1526
Signal Boards	2020	6	15	1.04	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059
Signal Boards	2020	26	50	7.28	0.788	4.448	4.132	0.007	0.206	0.206	568.299	0.071
Signal Boards	2020	51	120	8.081	0.395	3.504	3.134	0.006	0.187	0.187	568.299	0.035
Signal Boards	2020	121	175	11.756	0.298	3.043	2.309	0.006	0.11	0.11	568.299	0.026
Signal Boards	2020	176	250	14.813	0.274	1.281	2.35	0.007	0.071	0.071	686.695	0.024
Skid Steer Loaders	2020	16	25	0.522771	0.4393	3.76397	3.69113	0.0054	0.1447	0.1331	527.7577	0.1707
Skid Steer Loaders	2020	26	50	0.522771	0.4393	3.76397	3.69113	0.0054	0.1447	0.1331	527.7577	0.1707
Skid Steer Loaders	2020	51	120	0.224183	0.1884	3.2771	2.5046	0.0049	0.1084	0.0997	471.9075	0.1526

Surfacing Equipment	2020	26	50	0.637406	0.5356	3.93357	4.23906	0.0055	0.2164	0.1991	535.5275	0.1732
Surfacing Equipment	2020	51	120	0.392345	0.3297	3.43932	3.61216	0.0049	0.2063	0.1898	473.8188	0.1532
Surfacing Equipment	2020	121	175	0.365927	0.3075	2.93068	3.67232	0.0048	0.1745	0.1606	469.2079	0.1518
Surfacing Equipment	2020	176	250	0.252128	0.2119	1.21774	3.22243	0.0049	0.0972	0.0894	476.4261	0.1541
Surfacing Equipment	2020	251	500	0.173203	0.1455	1.21902	1.83755	0.0049	0.0669	0.0615	471.6331	0.1525
Surfacing Equipment	2020	501	750	0.168871	0.1419	0.99569	2.09374	0.0049	0.0744	0.0684	469.6252	0.1519
Sweepers/Scrubbers	2020	6	15	1.599203	1.3438	6.1554	5.09515	0.0054	0.4629	0.4259	525.3284	0.1699
Sweepers/Scrubbers	2020	16	25	1.599203	1.3438	6.1554	5.09515	0.0054	0.4629	0.4259	525.3284	0.1699
Sweepers/Scrubbers	2020	26	50	1.599203	1.3438	6.1554	5.09515	0.0054	0.4629	0.4259	525.3284	0.1699
Sweepers/Scrubbers	2020	51	120	0.618762	0.5199	3.82752	4.4821	0.0049	0.3601	0.3313	474.1157	0.1533
Sweepers/Scrubbers	2020	121	175	0.549287	0.4616	3.35909	4.60809	0.0049	0.2371	0.2181	473.1221	0.153
Sweepers/Scrubbers	2020	176	250	0.246498	0.2071	1.13655	2.4856	0.0049	0.079	0.0727	470.1263	0.152
Tractors/Loaders/Backhoes	2020	16	25	0.987255	0.8296	5.03491	4.39784	0.0053	0.2878	0.2648	515.874	0.1668
Tractors/Loaders/Backhoes	2020	26	50	0.987255	0.8296	5.03491	4.39784	0.0053	0.2878	0.2648	515.874	0.1668
Tractors/Loaders/Backhoes	2020	51	120	0.393883	0.331	3.60147	3.32571	0.0049	0.2103	0.1935	475.1543	0.1537
Tractors/Loaders/Backhoes	2020	121	175	0.29217	0.2455	3.10518	2.41467	0.0048	0.1217	0.1119	467.5132	0.1512
Tractors/Loaders/Backhoes	2020	176	250	0.268036	0.2252	1.19592	2.73794	0.0049	0.0898	0.0826	470.4998	0.1522
Tractors/Loaders/Backhoes	2020	251	500	0.230511	0.1937	1.35815	2.07976	0.0048	0.073	0.0672	468.2447	0.1514
Tractors/Loaders/Backhoes	2020	501	750	0.318709	0.2678	1.60984	3.11926	0.0048	0.1174	0.108	468.6602	0.1516
Trenchers	2020	6	15	1.076913	0.9049	4.8331	4.67651	0.0054	0.3561	0.3276	527.0962	0.1705
Trenchers	2020	16	25	1.076913	0.9049	4.8331	4.67651	0.0054	0.3561	0.3276	527.0962	0.1705
Trenchers	2020	26	50	1.076913	0.9049	4.8331	4.67651	0.0054	0.3561	0.3276	527.0962	0.1705
Trenchers	2020	51	120	0.726229	0.6102	3.83272	5.51952	0.0049	0.4132	0.3802	475.1265	0.1537
Trenchers	2020	121	175	0.500709	0.4207	3.32968	4.46042	0.0048	0.2281	0.2098	467.7348	0.1513
Trenchers	2020	176	250	0.466499	0.392	1.77405	4.8091	0.0049	0.1949	0.1793	473.5951	0.1532
Trenchers	2020	251	500	0.276702	0.2325	1.85932	2.775	0.0049	0.1052	0.0968	470.6367	0.1522
Trenchers	2020	501	750	0.083454	0.0701	0.95004	0.56006	0.0049	0.009	0.0083	472.6556	0.1529
Welders	2020	6	15	1.835	0.731	3.546	4.542	0.008	0.227	0.227	568.299	0.066
Welders	2020	16	25	3.507	0.769	2.473	4.538	0.007	0.212	0.212	568.299	0.069
Welders	2020	26	50	9.83	0.937	4.84	4.304	0.007	0.238	0.238	568.299	0.084
Welders	2020	51	120	7.278	0.455	3.605	3.351	0.006	0.216	0.216	568.299	0.041
Welders	2020	121	175	13.663	0.344	3.122	2.523	0.006	0.127	0.127	568.299	0.031
Welders	2020	176	250	12.577	0.261	1.093	2.143	0.006	0.066	0.066	568.299	0.023
Welders	2020	251	500	17.094	0.252	1.055	1.91	0.005	0.064	0.064	568.299	0.022

			ROG	CO	NOX	PM10	PM2.5
	Low HP	High HP	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)	(g/bhp-hr)
Tier 1	25	49	1.74	4.1	5.26	0.48	0.48
Tier 1	50	74	1.19	6.9	6.54	0.552	0.552
Tier 1	75	119	1.19	6.9	6.54	0.552	0.552
Tier 1	120	174	0.82	6.9	6.54	0.274	0.274
Tier 1	175	299	0.38	6.9	5.93	0.108	0.108
Tier 1	300	599	0.38	6.9	5.93	0.108	0.108
Tier 1	600	750	0.38	6.9	5.93	0.108	0.108
Tier 1	751	2000	0.38	6.9	5.93	0.108	0.108
Tier 2	25	49	0.29	4.1	4.63	0.28	0.28
Tier 2	50	74	0.23	3.7	4.75	0.192	0.192
Tier 2	75	119	0.23	3.7	4.75	0.192	0.192
Tier 2	120	174	0.19	3.7	4.17	0.128	0.128
Tier 2	175	299	0.12	2.6	4.15	0.088	0.088
Tier 2	300	599	0.12	2.6	3.79	0.088	0.088
Tier 2	600	750	0.12	2.6	3.79	0.088	0.088
Tier 2	751	2000	0.12	2.6	3.79	0.088	0.088
Tier 3	25	49	0.29	4.1	4.63	0.28	0.28
Tier 3	50	74	0.12	3.7	2.74	0.192	0.192
Tier 3	75	119	0.12	3.7	2.74	0.192	0.192
Tier 3	120	174	0.12	3.7	2.32	0.112	0.112
Tier 3	175	299	0.12	2.6	2.32	0.088	0.088
Tier 3	300	599	0.12	2.6	2.32	0.088	0.088
Tier 3	600	750	0.12	2.6	2.32	0.088	0.088
Tier 3	751	2000	0.12	2.6	2.32	0.088	0.088
Tier 4 Inter	25	49	0.12	4.1	4.55	0.128	0.128
Tier 4 Inter	50	74	0.12	3.7	2.74	0.112	0.112
Tier 4 Inter	75	119	0.11	3.7	2.14	0.008	0.008
Tier 4 Inter	120	174	0.06	3.7	2.15	0.008	0.008
Tier 4 Inter	175	299	0.08	2.6	1.29	0.008	0.008
Tier 4 Inter	300	599	0.08	2.6	1.29	0.008	0.008
Tier 4 Inter	600	750	0.08	2.6	1.29	0.008	0.008
Tier 4 Inter	751	2000	0.12	2.6	2.24	0.048	0.048
Tier 4	25	49	0.12	4.1	2.75	0.008	0.008
Tier 4	50	74	0.12	3.7	2.74	0.008	0.008
Tier 4	75	119	0.06	3.7	0.26	0.008	0.008
Tier 4	120	174	0.06	3.7	0.26	0.008	0.008
Tier 4	175	299	0.06	2.2	0.26	0.008	0.008
Tier 4	300	599	0.06	2.2	0.26	0.008	0.008
Tier 4	600	750	0.06	2.2	0.26	0.008	0.008
Tier 4	751	2000	0.06	2.6	2.24	0.016	0.016

EMFAC2014 (v1.0.7) Emission Rates

Region Type: Air Basin

Region: South Coast

Calendar Year: 2020

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

								Units (g/mile)																						
Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	ROG	RUNIC	RUNEX	NOx	RUNE	CO2	RUNE	PM10	RUP	PM10	PM	PM10	PM	PM10	Tot	PM2_5	RUN	PM2_5	PM	PM25	Tot	S0x	RUNEX
South Coa	2020	LDA	Aggregate-Aggregate	DSL		56829.79389	2109968.006	0.028613	0.302297	0.111531	271.9381	0.015905		0.008	0.03675	0.060655	0.015217	0.002	0.01575	0.032967	0.002596									
South Coa	2020	LDT1	Aggregate-Aggregate	DSL		635.3394479	16987.09574	0.161437	0.933943	0.908125	380.6999	0.120029		0.008	0.03675	0.164779	0.114837	0.002	0.01575	0.132587	0.003634									
South Coa	2020	LDT2	Aggregate-Aggregate	DSL		3604.05929	146715.2137	0.019958	0.172957	0.049452	356.9845	0.005603		0.008	0.03675	0.050353	0.005361	0.002	0.01575	0.023111	0.003408									
South Coa	2020	LDA	Aggregate-Aggregate	GAS		6057423.594	209765905.1	0.014967	0.729227	0.060989	295.0003	0.002034		0.008	0.03675	0.046784	0.00187	0.002	0.01575	0.01962	0.002957									
South Coa	2020	LDT1	Aggregate-Aggregate	GAS		513376.1359	17335871.67	0.041183	1.80811	0.171194	349.5685	0.00339		0.008	0.03675	0.04814	0.003117	0.002	0.01575	0.020867	0.003519									
South Coa	2020	LDT2	Aggregate-Aggregate	GAS		2127118.463	79246264.35	0.019208	0.911072	0.093773	395.3599	0.002003		0.008	0.03675	0.046753	0.001842	0.002	0.01575	0.019592	0.003961									
WORKER VEHICLES (Wt'd avg, based on VMT): GAS								0.017548	0.837319	0.075706	324.0493	0.002102		0.008	0.03675	0.046652	0.001933	0.002	0.01575	0.019683	0.003248									

*Truck, Pick-Up** in Wilderness Subs assumed LDT1: GAS

used for "1-Ton Truck, 4x4" and/or "Foreman Truck":

South Coa	2020	LHD1	Aggregate-Aggregate-GAS		119023.932	3434776.035	0.059178	1.455541	0.356075	739.644	0.001465		0.008	0.07644	0.085905	0.001348	0.002	0.03276	0.036108	0.007408									
South Coa	2020	LHD1	Aggregate-Aggregate-DSL		90013.17037	3225240.978	0.091325	0.543716	2.514058	490.8218	0.020599		0.012	0.07644	0.109039	0.019708	0.003	0.03276	0.055468	0.004686									
South Coa	2020	LHD2	Aggregate-Aggregate-GAS		24274.49035	840381.6761	0.024617	0.604116	0.207576	801.2286	0.001073		0.008	0.08918	0.098253	0.000987	0.002	0.03822	0.041207	0.008008									
South Coa	2020	LHD2	Aggregate-Aggregate-DSL		37747.87383	1487420.119	0.068959	0.381101	1.551896	533.927	0.015909		0.012	0.08918	0.117089	0.015221	0.003	0.03822	0.056441	0.005997									
South Coa	2020	MCV	Aggregate-Aggregate-GAS		281780.9382	1873569.141	2.512654	19.37247	1.130214	181.9936	0.002371		0.004	0.01176	0.017931	0.002031	0.001	0.00504	0.008071	0.002122									
South Coa	2020	MDV	Aggregate-Aggregate-GAS		1429908.979	4760016.58	0.046553	1.678468	0.186175	531.0371	0.002149		0.008	0.03675	0.046899	0.001979	0.002	0.01575	0.019729	0.005329									
South Coa	2020	MDV	Aggregate-Aggregate-DSL		21912.99843	860445.3851	0.018232	0.271825	0.052686	462.3875	0.007291		0.008	0.03675	0.052041	0.006976	0.002	0.01575	0.024726	0.004414									
South Coa	2020	MH	Aggregate-Aggregate-GAS		36719.33439	298070.8678	0.129527	0.407722	0.581535	1146.431	0.001861		0.012	0.13034	0.144201	0.001715	0.003	0.05586	0.060575	0.011512									
South Coa	2020	MH	Aggregate-Aggregate-DSL		9447.41779	80369.33851	0.080663	0.357602	0.439905	985.3276	0.121003		0.016	0.13034	0.267343	0.115769	0.004	0.05586	0.175629	0.009407									
South Coa	2020	Motor C	Aggregate-Aggregate-DSL		1042.883914	151396.4754	0.136785	0.534021	4.443939	1677.533	0.023133		0.012	0.13034	0.165473	0.022132	0.003	0.05586	0.080992	0.016004									
South Coa	2020	OBUS	Aggregate-Aggregate-GAS		8230.282987	376581.7233	0.041628	1.065011	0.302867	1140.243	0.000869		0.012	0.13034	0.143209	0.000799	0.003	0.05586	0.059659	0.0114									
South Coa	2020	PTO	Aggregate-Aggregate-DSL		0	218097.3862	0.310095	1.24772	6.890406	2080.49	0.026527		0	0	0.026527	0.02538	0	0	0.02538	0.019849									
South Coa	2020	SBUS	Aggregate-Aggregate-GAS		2198.134614	82713.10952	0.086991	2.001924	0.528094	661.6818	0.00122		0.008	0.7448	0.75402	0.001122	0.002	0.3192	0.322322	0.00564									
South Coa	2020	SBUS	Aggregate-Aggregate-DSL		5152.820983	196394.5571	0.133606	0.383265	6.931184	1297.585	0.039767		0.012	0.7448	0.796547	0.038028	0.003	0.3192	0.360228	0.01138									
South Coa	2020	T6 Ag	Aggregate-Aggregate-DSL		261.1770732	4446.995332	0.464849	1.356811	5.592368	1184.185	0.270991		0.012	0.13034	0.413331	0.259268	0.003	0.05586	0.318128	0.011298									
South Coa	2020	T6 CAIRP h	Aggregate-Aggregate-DSL		207.7781224	11119.88795	0.042777	0.18596	1.426581	1124.386	0.006801		0.012	0.13034	0.149141	0.006507	0.003	0.05586	0.065367	0.010727									
South Coa	2020	T6 CAIRP s	Aggregate-Aggregate-DSL		518.8954936	34135.31153	0.066939	0.262916	1.213085	1132.077	0.035179		0.012	0.13034	0.177519	0.033657	0.003	0.05586	0.092517	0.010801									
South Coa	2020	T6 instate	Aggregate-Aggregate-DSL		2935.534528	217436.3562	0.062244	0.216916	2.905379	1151.691	0.017055		0.012	0.13034	0.159396	0.016318	0.003	0.05586	0.075178	0.010988									
South Coa	2020	T6 instate	Aggregate-Aggregate-DSL		9922.411211	584118.9773	0.098585	0.359011	1.839515	1144.806	0.059631		0.012	0.13034	0.201971	0.057052	0.003	0.05586	0.115912	0.010922									
South Coa	2020	T6 instate	Aggregate-Aggregate-DSL		34858.72334	1760753.023	0.059031	0.221805	2.287683	1140.13	0.01156		0.012	0.13034	0.1539	0.01106	0.003	0.05586	0.06992	0.010877									
South Coa	2020	T6 instate	Aggregate-Aggregate-DSL		73926.21831	4486743.549	0.105945	0.384499	1.859777	1143.772	0.067945		0.012	0.13034	0.210285	0.065006	0.003	0.05586	0.123866	0.010912									
South Coa	2020	T6 OOS he	Aggregate-Aggregate-DSL		122.2894464	6371.27789	0.043135	0.187389	1.496031	1125.373	0.007359		0.012	0.13034	0.149699	0.007094	0.003	0.05586	0.0659	0.010737									
South Coa	2020	T6 OOS sr	Aggregate-Aggregate-DSL		297.3076169	19558.25065	0.066939	0.262916	1.213085	1132.077	0.035179		0.012	0.13034	0.177519	0.033657	0.003	0.05586	0.092517	0.010801									
South Coa	2020	T6 Public	Aggregate-Aggregate-DSL		5794.576714	93919.42621	0.048195	0.166073	4.538135	1148.94	0.023877		0.012	0.13034	0.166217	0.022844	0.003	0.05586	0.081704	0.010961									
South Coa	2020	T6 utility	Aggregate-Aggregate-DSL		1418.380421	27223.9119	0.024172	0.127233	0.545301	1166.82	0.001934		0.012	0.13034	0.144274	0.00185	0.003	0.05586	0.06071	0.011132									
South Coa	2020	T6T5	Aggregate-Aggregate-GAS		19066.17892	934177.175	0.083498	2.210431	0.560973	1149.945	0.001021		0.012	0.13034	0.143361	0.000938	0.003	0.05586	0.059798	0.011517									
South Coa	2020	T7 Ag	Aggregate-Aggregate-DSL		199.3352312	3307.923851	0.911615	3.830664	10.48731	1705.996	0.549042		0.036	0.06174	0.646782	0.525291	0.009	0.02646	0.560751	0.016275									
South Coa	2020	T7 CAIRP	Aggregate-Aggregate-DSL		8143.465406	1701037.208	0.118055	0.554591	3.688071	1549.997	0.016119		0.036	0.06174	0.113859	0.015422	0.009	0.02646	0.050882	0.014788									
South Coa	2020	T7 tractor	Aggregate-Aggregate-DSL		649.5819484	154247.6942	0.118951	0.519773	3.802699	1572.315	0.020806		0.036	0.06174	0.118546	0.015906	0.009	0.02646	0.055366	0.015001									
South Coa	2020	T7 NNOCs	Aggregate-Aggregate-DSL		8300.218136	2109288.254	0.073075	0.398386	1.649504	1448.493	0.007604		0.036	0.06174	0.105344	0.007276	0.009	0.02646	0.042736	0.013819									
South Coa	2020	T7 NOCS	Aggregate-Aggregate-DSL		3292.009762	671909.1954	0.11779	0.555872	3.752377	1552.125	0.016899		0.036	0.06174	0.114337	0.015879	0.009	0.02646	0.051339	0.014808									
South Coa	2020	T7 POLA	Aggregate-Aggregate-DSL		14035.82357	2118727.564	0.424223	0.870982	6.510516	1748.343	0.02774		0.036	0.06174	0.125481	0.02654	0.009	0.02646	0.062	0.01668									
South Coa	2020	T7 Public	Aggregate-Aggregate-DSL		7188.437489	164763.3257	0.090934	0.391163	9.101821	1677.799	0.050679		0.036	0.06174	0.148419	0.04846	0.009	0.02646	0.083946	0.016002									
South Coa	2020	T7 Single c	Aggregate-Aggregate-DSL		10526.37256	1098382.031	0.09513	0.387299	0.405699	1603.929	0.020356		0.036	0.06174	0.118096	0.019476	0.009	0.02646	0.054936	0.015302									
South Coa	2020	T7 single c	Aggregate-Aggregate-DSL		4191.522528	39891.4901	0.093343	0.390243	3.927058	1598.622	0.019017		0.036	0.06174	0.116757	0.018194	0.009	0.02646	0.053654	0.015252									
South Coa	2020	T7 TWCV	Aggregate-Aggregate-DSL		6823.766294	314296.2983	0.2799	8.965651	8.94745	381.95	0.009884		0.036	0.06174	0.107624	0.009456	0.009	0.02646	0.044916	0.015689									
South Coa	2020	T7 tractor	Aggregate-Aggregate-DSL		17955.46561	244360.798	0.140637	0.573692	4.78223	1526.175	0.023005		0.036	0.06174	0.120745	0.02201	0.009	0.02646	0.057407	0.015005									

Equipment Type	Load Factor
Aerial Lifts	0.31
Air Compressors	0.48
Bore/Drill Rigs	0.5
Cement and Mortar Mixers	0.56
Concrete/Industrial Saws	0.73
Cranes	0.29
Crawler Tractors	0.43
Crushing/Proc. Equipment	0.78
Dumpers/Tenders	0.38
Excavators	0.38
Forklifts	0.2
Generator Sets	0.74
Graders	0.41
Off-Highway Tractors	0.44
Off-Highway Trucks	0.38
Other Construction Equipment	0.42
Other General Industrial Equipment	0.34
Other Material Handling Equipment	0.4
Pavers	0.42
Paving Equipment	0.36
Plate Compactors	0.43
Pressure Washers	0.3
Pumps	0.74
Rollers	0.38
Rough Terrain Forklifts	0.4
Rubber Tired Dozers	0.4
Rubber Tired Loaders	0.36
Scrapers	0.48
Signal Boards	0.82
Skid Steer Loaders	0.37
Surfacing Equipment	0.3
Sweepers/Scrubbers	0.46
Tractors/Loaders/Backhoes	0.37
Trenchers	0.5
Welders	0.45