APPENDIX C

Air Quality and Greenhouse Gas Emissions Tables

Threemile Slough Crossing Remediation Project
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 1: CONSTRUCTION EMISSIONS SUMMARY

Model Run: October 16, 2025

Source	Peak Day Emissions, lbs/day													Project Emissions, tons												$MTCO_2e$
	NO_x	ROG	$PM_{10}E$*	$PM_{10}D$	$PM_{10}T$	$PM_{2.5}E$*	$PM_{2.5}D$	$PM_{2.5}T$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	$PM_{10}E$	$PM_{10}D$	$PM_{10}T$	$PM_{2.5}E$	$PM_{2.5}D$	$PM_{2.5}T$	CO	SO_2	N_2O	CH_4	CO_2	
Pre-Decommissioning Debris Survey	10.2	0.363	0.142	0.130	0.272	0.142	0.034	0.176	1.53	0.307	0.103	0.062	1,814	0.005	0.0002	0.0001	0.00013	0.0002	0.0001	0.00003	0.0001	0.001	0.0002	0.00008	0.00003	1.11	1.03
Terrestrial Decommissioning	6.74	0.937	0.220	9.55	9.77	0.218	1.39	1.60	22.4	0.086	0.626	1.36	8,439	0.054	0.008	0.002	0.056	0.058	0.002	0.011	0.014	0.129	0.0005	0.003	0.006	46.6	43.3
Marine Decommissioning	32.9	1.69	0.799	0.00	0.80	0.799	0.000	0.80	25.5	0.272	0.065	0.573	5,453	0.488	0.024	0.012	0.000	0.012	0.012	0.000	0.012	0.383	0.004	0.001	0.009	81.4	74.3
Post Decommissioning Debris Survey	10.2	0.363	0.142	0.130	0.272	0.142	0.130	0.272	1.53	0.307	0.103	0.062	1,814	0.005	0.0002	0.0001	0.00013	0.0002	0.0001	0.00003	0.0001	0.001	0.0002	0.00008	0.00003	1.108	1.03
Peak Day Emissions, lb/day	***32.9***	***1.69***	***0.799***	***9.55***	***9.77***	***0.80***	***1.39***	***1.60***	***25.5***	***0.307***	***0.63***	***1.36***	***8,439***	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Project Total Emissions, tons	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	***0.552***	***0.033***	***0.014***	***0.056***	***0.070***	***0.014***	***0.012***	***0.025***	***0.514***	***0.005***	***0.004***	***0.015***	***130***	***120***
SMAQMD Significance Thresholds	***85***	**--**	**--**	**--**	***80***	**--**	**--**	***82***	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	***14.6***	**--**	**--**	***15***	**--**	**--**	**--**	**--**	**--**	**--**
Threshold exceeded?	***No***				***No***			***No***						**--**	**--**	**--**	**--**	***No***	**--**	**--**	***No***	**--**	**--**	**--**	**--**	**--**	**--**
																						GHG - $MTCO_2e$ conversions		***273***	***27.9***	***1***	**--**
																						Approximate Total $MTCO_2e$, tons/yr		***120***			

Notes:

- Global Warming Potentials (273 for N_2O, 27.9 for CH_4, and 1 for CO_2, Table 7.SM.6, Intergovernmental Panel on Climate Change (IPCC). 2021. Sixth Assessment Report

SMAQMD - Sacramento Metropolitan Air Quality Management District

$MTCO_2e$ - Metric Tons of Carbon Dioxide Equivalent

NO_x - Oxides of Nitrogen

ROG - Reactive Organic Gases

$PM_{2.5}$ - Particulate Matter 2.5 Microns or Less. An **E** suffix - indicates exhaust, **D** suffix indicates dust and **T** suffix indicates total emissions.

PM_{10} - Particulate Matter 10 Microns or Less. An **E** suffix - indicates exhaust, **D** suffix indicates dust and **T** suffix indicates total emissions.

DPM - Diesel Particulate Matter

CO - Carbon Monoxide

SO_2 - Sulfur Dioxide

N_2O - Nitrous Oxide

CH_4 - Methane

CO_2 - Carbon Dioxide

Threemile Slough Crossing Remediation Project
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 2: Pre-Decommissioning Debris Survey

On-Site Sources

						Emission Factors (g/bhp-hr)									Emissions (lb/day)									Total Emissions (tons)								
Source	**BHP**	**Load Factor**	**Number**	**Hours/ Day**	**Duration (days)**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**
Air Compressor-1	50	48	1	0	0	2.740	0.120	0.008	0.008	3.700	0.007	0.004	0.059	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Derrick Barge Crane	330	29	1	0	0	3.790	0.120	0.088	0.088	2.600	0.005	0.004	0.153	472	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Diving Air Compressor	50	48	1	0	0	4.750	0.230	0.192	0.192	3.700	0.007	0.004	0.059	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Generator-1	100	74	1	0	0	2.740	0.120	0.008	0.008	3.700	0.006	0.004	0.021	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Hydroexcavator	300	38	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.154	476	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Light Plant-1	15	74	1	0	0	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Light Plant-2	15	74	1	0	0	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Light Plant-3	15	74	1	0	0	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Light Plant-4	15	74	1	0	0	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Support Tug Generator	75	43	1	0	0	3.751	0.149	0.116	0.116	0.820	0.119	0.016	0.025	550	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Support Tug Mains	500	50	1	0	0	3.728	0.134	0.051	0.051	0.567	0.113	0.015	0.023	527	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Survey Vessel	270	45	1	**10**	**1**	3.728	0.134	0.051	0.051	0.567	0.113	0.015	0.023	527	9.987	0.360	0.138	0.138	1.518	0.304	0.040	0.0619	1,412	0.005	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.71
SEP Generator	400	74	1	0	0	2.320	0.120	0.088	0.088	2.600	0.005	0.004	0.014	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Water Pump-1	20	74	1	0	0	4.407	0.709	0.177	0.177	2.376	0.007	0.004	0.064	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Welding Machine-1	20	45	1	0	0	4.407	0.709	0.177	0.177	2.376	0.007	0.004	0.064	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Wheeled Loader-1	240	36	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Wheeled Loader-2	240	36	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
														Total	**9.987**	**0.360**	**0.138**	**0.138**	**1.518**	**0.304**	**0.040**	**0.062**	**1412**	**0.005**	**0.000**	**0.000**	**0.000**	**0.001**	**0.000**	**0.000**	**0.000**	**0.71**

On-Road Sources

						Emission Factors (g/mile)									Peak Day Emissions (lb/day)									Total Emissions (tons)								
Source	**Peak Round Trips/Day**	**Average Round Trips/Day**	**Number of Vehicles**	**Length of Round Trip (miles)**	**Duration (days)**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**
Heavy Duty Trucks - T7TC (offsite)	1	1	1	120	2	0.9707	0.0116	0.0168	0.0161	0.054	0.0144	0.2394	0.001	1520	0.257	0.003	0.004	0.004	0.014	0.004	0.063	0.000	402	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.402
														Total	**0.257**	**0.003**	**0.004**	**0.004**	**0.014**	**0.004**	**0.063**	**0.000**	**402**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.402**

On-Road Sources

						Emission Factors (g/mile)		Peak Day Emissions (lb/day)		Total Emissions (tons)	
Source	**Peak Round Trips/Day**	**Average Round Trips/Day**	**Number of Vehicles**	**Length of Round Trip (miles)**	**Duration (days)**	**PM_{10}Dust**	**$PM_{2.5}$Dust**	**PM_{10}Dust**	**$PM_{2.5}$Dust**	**PM_{10}Dust**	**$PM_{2.5}$Dust**
Heavy Duty Trucks - T7TC (offsite)	1	1	1	120	2	0.4920	0.1299	0.130162	0.034375113	0.000130	0.000034
							Total	**0.130162**	**0.034375**	**0.000130**	**0.000034**

Notes:

Hours per day and durations provided by client.

Round trips for supplies deliveries and equipment provided by client.

Threemile Slough Crossing Remediation Project
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 3: Terrestrial Decommissioning

On-Site Sources

						Emission Factors (g/bhp-hr)									Emissions (lb/day)									Total Emissions (tons)								
Source	**BHP**	**Load Factor**	**Number**	**Hours/ Day**	**Duration (days)**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**
Air Compressor-1	50	48	1	0	0	2.740	0.120	0.008	0.008	3.700	0.007	0.004	0.059	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Derrick Barge Crane	330	29	1	0	0	3.790	0.120	0.088	0.088	2.600	0.005	0.004	0.153	472	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Diving Air Compressor	50	48	1	0	0	4.750	0.230	0.192	0.192	3.700	0.007	0.004	0.059	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Excavator-1	310	38	1	**8**	**10**	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.540	0.125	0.017	0.017	4.571	0.010	0.009	0.3158	976	0.003	0.001	0.000	0.000	0.023	0.000	0.000	0.002	4.88
Excavator-2	310	38	1	**8**	**10**	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.540	0.125	0.017	0.017	4.571	0.010	0.009	0.3158	976	0.003	0.001	0.000	0.000	0.023	0.000	0.000	0.002	4.88
Generator-1	100	74	1	0	0	2.740	0.120	0.008	0.008	3.700	0.006	0.004	0.021	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Hydroexcavator	300	38	1	**6**	**2**	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.154	476	0.392	0.090	0.012	0.012	3.317	0.008	0.006	0.2322	718	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.72
Light Plant-1	15	74	1	**6**	**30**	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.627	0.089	0.026	0.026	0.513	0.001	0.001	0.0079	83.4	0.009	0.001	0.000	0.000	0.008	0.000	0.000	0.000	1.25
Light Plant-2	15	74	1	**6**	**30**	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.627	0.089	0.026	0.026	0.513	0.001	0.001	0.0079	83.4	0.009	0.001	0.000	0.000	0.008	0.000	0.000	0.000	1.25
Light Plant-3	15	74	1	**6**	**30**	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.627	0.089	0.026	0.026	0.513	0.001	0.001	0.0079	83.4	0.009	0.001	0.000	0.000	0.008	0.000	0.000	0.000	1.25
Light Plant-4	15	74	1	**6**	**30**	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.627	0.089	0.026	0.026	0.513	0.001	0.001	0.0079	83.4	0.009	0.001	0.000	0.000	0.008	0.000	0.000	0.000	1.25
Support Tug Generator	75	43	1	0	0	3.751	0.149	0.116	0.116	0.820	0.119	0.016	0.025	550	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Support Tug Mains	500	50	1	0	0	3.728	0.134	0.051	0.051	0.567	0.113	0.015	0.023	527	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Survey Vessel	270	45	1	0	0	3.728	0.134	0.051	0.051	0.567	0.113	0.015	0.023	527	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
SEP Generator	400	74	1	0	0	2.320	0.120	0.088	0.088	2.600	0.005	0.004	0.014	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Water Pump-1	20	74	1	0	0	4.407	0.709	0.177	0.177	2.376	0.007	0.004	0.064	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Welding Machine-1	20	45	1	0	0	4.407	0.709	0.177	0.177	2.376	0.007	0.004	0.064	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Wheeled Loader-1	240	36	1	**8**	**10**	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.396	0.091	0.012	0.012	3.352	0.008	0.006	0.2316	716	0.002	0.000	0.000	0.000	0.017	0.000	0.000	0.001	3.58
Wheeled Loader-2	240	36	1	**8**	**10**	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.396	0.091	0.012	0.012	3.352	0.008	0.006	0.2316	716	0.002	0.000	0.000	0.000	0.017	0.000	0.000	0.001	3.58
														Total	**4.77**	**0.879**	**0.174**	**0.174**	**21.2**	**0.048**	**0.039**	**1.359**	**4,436**	**0.047**	**0.008**	**0.002**	**0.002**	**0.113**	**0.000**	**0.000**	**0.006**	**22.64**

On-Road Sources

						Emission Factors (g/mile)									Peak Day Emissions (lb/day)									Total Emissions (tons)								
Source	**Peak Round Trips/Day**	**Average Round Trips/Day**	**Number of Vehicles**	**Length of Round Trip (miles)**	**Duration (days)**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**
Passenger Vehicle - LDA (offsite)	1	1	3	50	30	0.0412	0.0075	0.0010	0.0009	0.709	0.0027	0.0045	0.002	278	0.014	0.002	0.000	0.000	0.234	0.001	0.001	0.001	91.9	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	1.379
Light-Duty Truck - LDT2 (offsite)	1	1	9	50	30	0.0453	0.0084	0.0043	0.0041	0.085	0.0026	0.0436	0.000	277	0.045	0.008	0.004	0.004	0.084	0.003	0.043	0.000	275	0.001	0.000	0.000	0.000	0.001	0.000	0.001	0.000	4.122
Passenger Vehicle - LDA (offsite)	1	1	5	50	30	0.0412	0.0075	0.0010	0.0009	0.709	0.0027	0.0045	0.002	278	0.023	0.004	0.001	0.001	0.391	0.002	0.002	0.001	153.2	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	2.298
Light-Duty Truck - LDT2 (offsite)	1	1	15	50	30	0.0453	0.0084	0.0043	0.0041	0.085	0.0026	0.0436	0.000	277	0.075	0.014	0.007	0.007	0.141	0.004	0.072	0.001	458	0.001	0.000	0.000	0.000	0.002	0.000	0.001	0.000	6.869
Passenger Vehicle - LDA (offsite)	1	1	2	50	30	0.0412	0.0075	0.0010	0.0009	0.709	0.0027	0.0045	0.002	278	0.009	0.002	0.000	0.000	0.156	0.001	0.001	0.000	61.3	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.919
Light-Duty Truck - LDT2 (offsite)	1	1	6	50	30	0.0453	0.0084	0.0043	0.0041	0.085	0.0026	0.0436	0.000	277	0.030	0.006	0.003	0.003	0.056	0.002	0.029	0.000	183	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	2.748
Heavy Duty Trucks - T7TC (offsite)	1	1	20	20	5	0.9707	0.0116	0.0168	0.0161	0.054	0.0144	0.2394	0.001	1520	0.856	0.010	0.015	0.014	0.048	0.013	0.211	0.000	1,340	0.002	0.000	0.000	0.000	0.000	0.000	0.001	0.000	3.350
Heavy Duty Trucks - T7TC (offsite)	1	1	1	70	4	0.9707	0.0116	0.0168	0.0161	0.054	0.0144	0.2394	0.001	1520	0.150	0.002	0.003	0.002	0.008	0.002	0.037	0.000	235	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.469
Heavy Duty Trucks - T7TC (offsite)	1	1	1	50	4	0.9707	0.0116	0.0168	0.0161	0.054	0.0144	0.2394	0.001	1520	0.107	0.001	0.002	0.002	0.006	0.002	0.026	0.000	168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.335
Heavy Duty Trucks - T7TC (offsite)	1	1	1	50	4	0.9707	0.0116	0.0168	0.0161	0.054	0.0144	0.2394	0.001	1520	0.107	0.001	0.002	0.002	0.006	0.002	0.026	0.000	168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.335
Heavy Duty Trucks - T7TC (offsite)	1	1	1	50	1	0.9707	0.0116	0.0168	0.0161	0.054	0.0144	0.2394	0.001	1520	0.107	0.001	0.002	0.002	0.006	0.002	0.026	0.000	168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.084
Heavy Duty Trucks - T7TC (offsite)	1	1	1	50	1	0.9707	0.0116	0.0168	0.0161	0.054	0.0144	0.2394	0.001	1520	0.107	0.001	0.002	0.002	0.006	0.002	0.026	0.000	168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.084
Heavy Duty Trucks - T7TC (offsite)	1	1	1	60	3	0.9707	0.0116	0.0168	0.0161	0.054	0.0144	0.2394	0.001	1520	0.128	0.002	0.002	0.002	0.007	0.002	0.032	0.000	201	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.302
Heavy Duty Trucks - T7TC (offsite)	1	1	1	50	4	0.9707	0.0116	0.0168	0.0161	0.054	0.0144	0.2394	0.001	1520	0.107	0.001	0.002	0.002	0.006	0.002	0.026	0.000	168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.335
Heavy Duty Trucks - T7TC (offsite)	1	1	1	50	4	0.9707	0.0116	0.0168	0.0161	0.054	0.0144	0.2394	0.001	1520	0.107	0.001	0.002	0.002	0.006	0.002	0.026	0.000	168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.335
														Total	**1.97**	**0.057**	**0.046**	**0.044**	**1.162**	**0.038**	**0.587**	**0.004**	**4,003**	**0.007**	**0.001**	**0.000**	**0.000**	**0.016**	**0.000**	**0.003**	**0.000**	**23.96**

On-Road Sources

Source	Peak Round Trips/Day	Average Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)		Peak Day Emissions (lb/day)		Total Emissions (tons)	
						PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust
Passenger Vehicle - LDA (offsite)	1	1	3	50	30	0.4263	0.1069	0.140979	0.035365582	0.002115	0.000530
Light-Duty Truck - LDT2 (offsite)	1	1	9	50	30	0.4272	0.1073	0.423850	0.106416339	0.006358	0.001596
Passenger Vehicle - LDA (offsite)	1	1	5	50	30	0.4263	0.1069	0.234965	0.058942636	0.003524	0.000884
Light-Duty Truck - LDT2 (offsite)	1	1	15	50	30	0.4272	0.1073	0.706416	0.177360565	0.010596	0.002660
Passenger Vehicle - LDA (offsite)	1	1	2	50	30	0.4263	0.1069	0.093986	0.023577054	0.001410	0.000354
Light-Duty Truck - LDT2 (offsite)	1	1	6	50	30	0.4272	0.1073	0.282567	0.070944226	0.004238	0.001064
Heavy Duty Trucks - T7TC (offsite)	1	1	20	20	5	0.4920	0.1299	0.433874	0.114583709	0.001085	0.000286
Heavy Duty Trucks - T7TC (offsite)	1	1	1	70	4	0.4920	0.1299	0.075928	0.020052149	0.000152	0.000040
Heavy Duty Trucks - T7TC (offsite)	1	1	1	50	4	0.4920	0.1299	0.054234	0.014322964	0.000108	0.000029
Heavy Duty Trucks - T7TC (offsite)	1	1	1	50	4	0.4920	0.1299	0.054234	0.014322964	0.000108	0.000029
Heavy Duty Trucks - T7TC (offsite)	1	1	1	50	1	0.4920	0.1299	0.054234	0.014322964	0.000027	0.000007
Heavy Duty Trucks - T7TC (offsite)	1	1	1	50	1	0.4920	0.1299	0.054234	0.014322964	0.000027	0.000007
Heavy Duty Trucks - T7TC (offsite)	1	1	1	60	3	0.4920	0.1299	0.065081	0.017187556	0.000098	0.000026
Heavy Duty Trucks - T7TC (offsite)	1	1	1	50	4	0.4920	0.1299	0.054234	0.014322964	0.000108	0.000029
Heavy Duty Trucks - T7TC (offsite)	1	1	1	50	4	0.4920	0.1299	0.054234	0.014322964	0.000108	0.000029
							Total	**2.783050**	**0.710368**	**0.030064**	**0.007570**

Notes:
Hours per day and durations provided by client.
Round trips for supplies deliveries, equipment and waste disposal provided by client.

Threemile Slough Crossing Remediation Project
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 4: Marine Decommissioning

On-Site Sources

Source	BHP	Load Factor	Number	Hours/ Day	Duration (days)	Emission Factors (g/bhp-hr)									Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Air Compressor-1	50	48	1	**2**	**60**	2.740	0.120	0.008	0.008	3.700	0.007	0.004	0.059	568	0.290	0.013	0.001	0.001	0.392	0.001	0.000	0.0062	60.1	0.009	0.000	0.000	0.000	0.012	0.000	0.000	0.000	1.80
Derrick Barge Crane	330	29	1	**12**	**30**	3.790	0.120	0.088	0.088	2.600	0.005	0.004	0.153	472	9.595	0.304	0.223	0.223	6.583	0.013	0.011	0.3874	1,195	0.144	0.005	0.003	0.003	0.099	0.000	0.000	0.006	17.92
Diving Air Compressor	50	48	1	**3**	**30**	4.750	0.230	0.192	0.192	3.700	0.007	0.004	0.059	568	0.754	0.037	0.030	0.030	0.587	0.001	0.001	0.0094	90.2	0.011	0.001	0.000	0.000	0.009	0.000	0.000	0.000	1.35
Generator-1	100	74	1	**12**	**30**	2.740	0.120	0.008	0.008	3.700	0.006	0.004	0.021	568	5.364	0.235	0.016	0.016	7.243	0.012	0.008	0.0411	1,113	0.080	0.004	0.000	0.000	0.109	0.000	0.000	0.001	16.69
Hydroexcavator	300	38	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.154	476	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Light Plant-1	15	74	1	**6**	**30**	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.627	0.089	0.026	0.026	0.513	0.001	0.001	0.0079	83.4	0.009	0.001	0.000	0.000	0.008	0.000	0.000	0.000	1.25
Light Plant-2	15	74	1	**6**	**30**	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.627	0.089	0.026	0.026	0.513	0.001	0.001	0.0079	83.4	0.009	0.001	0.000	0.000	0.008	0.000	0.000	0.000	1.25
Light Plant-3	15	74	1	**6**	**30**	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.627	0.089	0.026	0.026	0.513	0.001	0.001	0.0079	83.4	0.009	0.001	0.000	0.000	0.008	0.000	0.000	0.000	1.25
Light Plant-4	15	74	1	**6**	**30**	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.627	0.089	0.026	0.026	0.513	0.001	0.001	0.0079	83.4	0.009	0.001	0.000	0.000	0.008	0.000	0.000	0.000	1.25
Support Tug Generator	75	43	1	**12**	**30**	3.751	0.149	0.116	0.116	0.820	0.119	0.016	0.025	550	3.200	0.127	0.099	0.099	0.700	0.101	0.014	0.0210	470	0.048	0.002	0.001	0.001	0.010	0.002	0.000	0.000	7.04
Support Tug Mains	500	50	1	**2**	**30**	3.728	0.134	0.051	0.051	0.567	0.113	0.015	0.023	527	4.110	0.148	0.057	0.057	0.625	0.125	0.016	0.0255	581	0.062	0.002	0.001	0.001	0.009	0.002	0.000	0.000	8.72
Survey Vessel	270	45	1	0	0	3.728	0.134	0.051	0.051	0.567	0.113	0.015	0.023	527	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
SEP Generator	400	74	1	**4**	**30**	2.320	0.120	0.088	0.088	2.600	0.005	0.004	0.014	568	6.056	0.313	0.230	0.230	6.787	0.013	0.011	0.0365	1,483	0.091	0.005	0.003	0.003	0.102	0.000	0.000	0.001	22.25
Water Pump-1	20	74	1	**2**	**30**	4.407	0.709	0.177	0.177	2.376	0.007	0.004	0.064	568	0.288	0.046	0.012	0.012	0.155	0.000	0.000	0.0042	37.1	0.004	0.001	0.000	0.000	0.002	0.000	0.000	0.000	0.56
Welding Machine-1	20	45	1	**8**	**2**	4.407	0.709	0.177	0.177	2.376	0.007	0.004	0.064	568	0.700	0.113	0.028	0.028	0.377	0.001	0.001	0.0102	90.2	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.09
Wheeled Loader-1	240	36	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Wheeled Loader-2	240	36	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
														Total	**32.9**	**1.69**	**0.799**	**0.799**	**25.499**	**0.272**	**0.065**	**0.573**	**5453**	**0.488**	**0.024**	**0.012**	**0.012**	**0.383**	**0.004**	**0.001**	**0.009**	**81.43**

On-Road Sources

Source	Peak Round Trips/Day	Average Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)									Peak Day Emissions (lb/day)									Total Emissions (tons)								
						NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Passenger Vehicle - LDA (offsite)	0	0	0	0	0	0.0412	0.0075	0.0010	0.0009	0.709	0.0027	0.0045	0.002	278	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Light-Duty Truck - LDT2 (offsite)	0	0	0	0	0	0.0453	0.0084	0.0043	0.0041	0.085	0.0026	0.0436	0.000	277	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
														Total	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.00**

On-Road Sources

Source	Peak Round Trips/Day	Average Round Trips/Day	Number of Vehicles	Length of Round Trip (miles)	Duration (days)	Emission Factors (g/mile)		Peak Day Emissions (lb/day)		Total Emissions (tons)	
						PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust
Passenger Vehicle - LDA (offsite)	0	0	0	0	0	0.4263	0.1069	0.000000	0.000000	0.000000	0.000000
Light-Duty Truck - LDT2 (offsite)	0	0	0	0	0	0.4272	0.1073	0.000000	0.000000	0.000000	0.000000
							Total	**0.000000**	**0.000000**	**0.000000**	**0.000000**

Notes:

Hours per day and durations provided by client.

Round trips for supplies deliveries, equipment and waste disposal provided by client.

Threemile Slough Crossing Remediation Project
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 5: Post Decommissioning Debris Survey

On-Site Sources

						Emission Factors (g/bhp-hr)									Emissions (lb/day)									Total Emissions (tons)								
Source	**BHP**	**Load Factor**	**Number**	**Hours/ Day***	**Duration (days)**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**
Air Compressor-1	50	48	1	0	0	2.740	0.120	0.008	0.008	3.700	0.007	0.004	0.059	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Derrick Barge Crane	330	29	1	0	0	3.790	0.120	0.088	0.088	2.600	0.005	0.004	0.153	472	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Diving Air Compressor	50	48	1	0	0	4.750	0.230	0.192	0.192	3.700	0.007	0.004	0.059	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Generator-1	100	74	1	0	0	2.740	0.120	0.008	0.008	3.700	0.006	0.004	0.021	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Hydroexcavator	300	38	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.154	476	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Light Plant-1	15	74	1	0	0	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Light Plant-2	15	74	1	0	0	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Light Plant-3	15	74	1	0	0	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Light Plant-4	15	74	1	0	0	4.269	0.607	0.178	0.178	3.491	0.008	0.004	0.054	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Support Tug Generator	75	43	1	0	0	3.751	0.149	0.116	0.116	0.820	0.119	0.016	0.025	550	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Support Tug Mains	500	50	1	0	0	3.728	0.134	0.051	0.051	0.567	0.113	0.015	0.023	527	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Survey Vessel	270	45	1	**10**	**1**	3.728	0.134	0.051	0.051	0.567	0.113	0.015	0.023	527	9.987	0.360	0.138	0.138	1.518	0.304	0.040	0.0619	1,412	0.005	0.000	0.000	0.000	0.001	0.000	0.000	0.71
SEP Generator	400	74	1	0	0	2.320	0.120	0.088	0.088	2.600	0.005	0.004	0.014	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Water Pump-1	20	74	1	0	0	4.407	0.709	0.177	0.177	2.376	0.007	0.004	0.064	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Welding Machine-1	20	45	1	0	0	4.407	0.709	0.177	0.177	2.376	0.007	0.004	0.064	568	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Wheeled Loader-1	240	36	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Wheeled Loader-2	240	36	1	0	0	0.260	0.060	0.008	0.008	2.200	0.005	0.004	0.152	470	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
														Total	**9.987**	**0.360**	**0.138**	**0.138**	**1.518**	**0.304**	**0.040**	**0.062**	**1412**	**0.005**	**0.000**	**0.000**	**0.000**	**0.001**	**0.000**	**0.000**	**0.000**	**0.71**

On-Road Sources

						Emission Factors (g/mile)									Peak Day Emissions (lb/day)									Total Emissions (tons)								
Source	**Peak Round Trips/Day**	**Average Round Trips/Day**	**Number of Vehicles**	**Length of Round Trip (miles)**	**Duration (days)**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**N_2O**	**CH_4**	**CO_2**
Heavy Duty Trucks - T7TC (offsite)	1	1	1	120	2	0.9707	0.0116	0.0168	0.0161	0.054	0.0144	0.2394	0.001	1520	0.257	0.003	0.004	0.004	0.014	0.004	0.063	0.000	402	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.402
														Total	**0.257**	**0.003**	**0.004**	**0.004**	**0.014**	**0.004**	**0.063**	**0.000**	**402**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.40**

On-Road Sources

						Emission Factors (g/mile)		Peak Day Emissions (lb/day)		Total Emissions (tons)	
Source	**Peak Round Trips/Day**	**Average Round Trips/Day**	**Number of Vehicles**	**Length of Round Trip (miles)**	**Duration (days)**	**PM_{10}Dust**	**$PM_{2.5}$Dust**	**PM_{10}Dust**	**$PM_{2.5}$Dust**	**PM_{10}Dust**	**$PM_{2.5}$Dust**
Heavy Duty Trucks - T7TC (offsite)	1	1	1	120	2	0.4920	0.1299	0.130162	0.034375113	0.000130	0.000034
							Total	**0.130162**	**0.034375**	**0.000130**	**0.000034**

Notes:

Hours per day and durations provided by client.

Round trips for supplies deliveries and equipment provided by client.

Threemile Slough Crossing Remediation Project
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 6: Construction - Fugitive Dust Emissions

Construction

Activity	Source	Source Units	Number of Days	Emission Factor	Emission Factor, Units	Peak Day Emissions (lbs/day)		Total Emissions (tons)	
						PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
Pre-Decommissioning Debris Survey									
Site Grading	0.00	acres/day	0	1.1	lbs PM10/day/acre	0.0000	0.0000	0.0000	0.0000
Truck Loading & Dumping (Grading Phase)	0.00	tons/day	0	1.72E-04	lbs/ton	0.0000	0.0000	0.0000	0.0000
Vehicle Miles Off-Road	0.00	vehicle-miles/day	0	2.59	lbs/vehicle-mile	0.0000	0.0000	0.0000	0.0000
					Max/Total	**0.000**	**0.000**	**0.000**	**0.0000**
Terrestrial Decommissioning									
Site Grading	0.25	acres/day	0	1.1	lbs PM10/day/acre	0.2750	0.0250	0.0000	0.0000
Truck Loading & Dumping (Grading Phase)	100	tons/day	0	1.72E-04	lbs/ton	0.0172	0.0026	0.0000	0.0000
Vehicle Miles Off-Road	2.5	vehicle-miles/day	8	2.59	lbs/vehicle-mile	6.4752	0.6475	0.0259	0.0039
					Max/Total	**6.767**	**0.675**	**0.026**	**0.0039**
Marine Decommissioning									
Site Grading	0.00	acres/day	0	1.1	lbs PM10/day/acre	0.0000	0.0000	0.0000	0.0000
Truck Loading & Dumping (Grading Phase)	0.00	tons/day	0	1.72E-04	lbs/ton	0.0000	0.0000	0.0000	0.0000
Vehicle Miles Off-Road	0.00	vehicle-miles/day	0	2.59	lbs/vehicle-mile	0.0000	0.0000	0.0000	0.0000
					Max/Total	**0.000**	**0.000**	**0.0000**	**0.0000**
Post Decommissioning Debris Survey									
Site Grading	0.00	acres/day	0	1.1	lbs PM10/day/acre	0.0000	0.0000	0.0000	0.0000
Truck Loading & Dumping (Grading Phase)	0.00	tons/day	0	1.72E-04	lbs/ton	0.0000	0.0000	0.0000	0.0000
Vehicle Miles Off-Road	0.00	vehicle-miles/day	0	2.59	lbs/vehicle-mile	0.0000	0.0000	0.0000	0.0000
					Max/Total	**0.000**	**0.000**	**0.0000**	**0.0000**

Fugitive Dust Emissions: Inputs for the Table

Emission factors based on following inputs		
Mean number of rain days per year	*0*	*worst case*
Silt content of soil, fill storage pile, %	*1.5*	*SCAQMD default value*
Roadway inputs (paved and unpaved, as per URBEMIS)		
Roads mean vehicle weight, tons	*20.61*	*based on project description, HHDT + LDT and vehicles weight (average of full and empty)*
unpaved dirt road silt content, %	*8.4*	*AP-42 construction sites*
Truck Loading inputs		
k, particle size multiplier, default=0.35 fpr pm10	*0.35*	
U, mean wind speed, mph range 1.3-15	*8.15*	
M, moisture content, default=12%	*12*	
PM2.5/PM10 ratio truck loading	*0.15*	
Site grading emissions from CalEEMod for grading	*0.091*	*ratio of PM2.5/PM10 CalEEMod*
Demolition materials, tons/yds3	*1.000*	*estimated for concrete debris*
Fill materials, tons/yds3	*1.000*	*estimated for soils*
Mitigation: demolition area watering (fraction reduction)	*0.00*	*0.61 for watering every 3 hours (SCAQMD)*
Mitigation: grading/dist area watering (fraction reduction)	*0.00*	*0.61 for watering every 3 hours (SCAQMD)*
Mitigation: dumping soil moisture (fraction reduction)	*0.00*	*0.69 for minimum 12% soil moisture (SCAQMD)*
Mitigation: storage piles (fraction reduction)	*0.00*	*0.90 for watering by hand and covering (SCAQMD)*
Mitigation: roads (fraction reduction)	*0.00*	*0.55 for watering 3X per day (SCAQMD), 0.80 for soil binders applied monthly (AP-42)*

Notes:

PM2.5/PM10 ratio as per AP-42 k factor for PM10 and PM2.5

Demolition dust calculations as per EPA AP-42 11.19 and 13.2.4

Truck loading dumping cut/fill based on CalEEMod

Storage pile emissions based on SCAQMD Handbook (URBEMIS does not address emissions from storage piles)

Paved and unpaved road dust emissions based on AP-42 2006 (unpaved) Chapt 13. EPA AP-42 2006 is the same as URBEMS and CalEEMod

One month assumes 22 days of activity, as per URBEMIS

Threemile Slough Crossing Remediation Project
CRITERIA POLLUTANTS & GREENHOUSE GAS EMISSIONS
TABLE 7: Emission Factors and Assumptions

Onsite Construction				Emission Factors (g/bhp-hr)									Emission Factors (lb/bhp-hr)								
	Tier	Operational Horsepower	Load Factor	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Air Compressor-1	4	50	48	2.740	0.120	0.008	0.008	3.700	0.007	0.0042	0.059	568	0.0060	0.0003	0.0000	0.0000	0.0082	0.00002	0.00001	0.00013	1.2529
Derrick Barge Crane	2	330	29	3.790	0.120	0.088	0.088	2.600	0.005	0.0042	0.153	472	0.0084	0.0003	0.0002	0.0002	0.0057	0.00001	0.00001	0.00034	1.0405
Diving Air Compressor	2	50	48	4.750	0.230	0.192	0.192	3.700	0.007	0.0042	0.059	568	0.0105	0.0005	0.0004	0.0004	0.0082	0.00002	0.00001	0.00013	1.2529
Excavator-1	4	310	38	0.260	0.060	0.008	0.008	2.200	0.005	0.0042	0.152	470	0.0006	0.0001	0.0000	0.0000	0.0049	0.00001	0.00001	0.00034	1.0355
Excavator-2	4	310	38	0.260	0.060	0.008	0.008	2.200	0.005	0.0042	0.152	470	0.0006	0.0001	0.0000	0.0000	0.0049	0.00001	0.00001	0.00034	1.0355
Generator-1	4	100	74	2.740	0.120	0.008	0.008	3.700	0.006	0.0042	0.021	568	0.0060	0.0003	0.0000	0.0000	0.0082	0.00001	0.00001	0.00005	1.2529
Hydroexcavator	4	300	38	0.260	0.060	0.008	0.008	2.200	0.005	0.0042	0.154	476	0.0006	0.0001	0.0000	0.0000	0.0049	0.00001	0.00001	0.00034	1.0501
Light Plant-1	4	15	74	4.269	0.607	0.178	0.178	3.491	0.008	0.0042	0.054	568	0.0094	0.0013	0.0004	0.0004	0.0077	0.00002	0.00001	0.00012	1.2529
Light Plant-2	4	15	74	4.269	0.607	0.178	0.178	3.491	0.008	0.0042	0.054	568	0.0094	0.0013	0.0004	0.0004	0.0077	0.00002	0.00001	0.00012	1.2529
Light Plant-3	4	15	74	4.269	0.607	0.178	0.178	3.491	0.008	0.0042	0.054	568	0.0094	0.0013	0.0004	0.0004	0.0077	0.00002	0.00001	0.00012	1.2529
Light Plant-4	4	15	74	4.269	0.607	0.178	0.178	3.491	0.008	0.0042	0.054	568	0.0094	0.0013	0.0004	0.0004	0.0077	0.00002	0.00001	0.00012	1.2529
Support Tug Generator	2	75	43	3.751	0.149	0.116	0.116	0.820	0.119	0.0164	0.025	550	0.0083	0.0003	0.0003	0.0003	0.0018	0.00026	0.00004	0.00005	1.2133
Support Tug Mains	2	500	50	3.728	0.134	0.051	0.051	0.567	0.113	0.0149	0.023	527	0.0082	0.0003	0.0001	0.0001	0.0012	0.00025	0.00003	0.00005	1.1623
Survey Vessel	3	270	45	3.728	0.134	0.051	0.051	0.567	0.113	0.0149	0.023	527	0.0082	0.0003	0.0001	0.0001	0.0012	0.00025	0.00003	0.00005	1.1623
SEP Generator	3	400	74	2.320	0.120	0.088	0.088	2.600	0.005	0.0042	0.014	568	0.0051	0.0003	0.0002	0.0002	0.0057	0.00001	0.00001	0.00003	1.2529
Water Pump-1	4	20	74	4.407	0.709	0.177	0.177	2.376	0.007	0.0042	0.064	568	0.0097	0.0016	0.0004	0.0004	0.0052	0.00002	0.00001	0.00014	1.2529
Welding Machine-1	4	20	45	4.407	0.709	0.177	0.177	2.376	0.007	0.0042	0.064	568	0.0097	0.0016	0.0004	0.0004	0.0052	0.00002	0.00001	0.00014	1.2529
Wheeled Loader-1	4	240	36	0.260	0.060	0.008	0.008	2.200	0.005	0.0042	0.152	470	0.0006	0.0001	0.0000	0.0000	0.0049	0.00001	0.00001	0.00034	1.0359
Wheeled Loader-2	4	240	36	0.260	0.060	0.008	0.008	2.200	0.005	0.0042	0.152	470	0.0006	0.0001	0.0000	0.0000	0.0049	0.00001	0.00001	0.00034	1.0359

Offsite Trasporation			Emission Factors (g/mile)									Emission Factors (lb/mile)								
Source	Tier	Region	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2	NO_x	ROG	PM_{10}	$PM_{2.5}$	CO	SO_2	N_2O	CH_4	CO_2
Passenger Vehicle - LDA (offsite)	--	Sacramento County	0.0412	0.0075	0.0010	0.0009	0.7090	0.0027	0.0045	0.0019	277.9	0.0001	0.0000	0.0000	0.0000	0.0016	0.00001	0.00001	0.00000	0.6127
Light-Duty Truck - LDT2 (offsite)	--	Sacramento County	0.0453	0.0084	0.0043	0.0041	0.0850	0.0026	0.0436	0.0004	277.0	0.0001	0.0000	0.0000	0.0000	0.0002	0.00001	0.00010	0.00000	0.6106
Med-Heavy Duty - T6 Utility (offsite)	--	Sacramento County	0.2846	0.0040	0.0044	0.0042	0.0226	0.0092	0.1528	0.0002	969.8	0.0006	0.0000	0.0000	0.0000	0.0000	0.00002	0.00034	0.00000	2.1380
Heavy Duty Trucks - T7TC (offsite)	--	Sacramento County	0.9707	0.0116	0.0168	0.0161	0.0542	0.0144	0.2394	0.0005	1519.6	0.0021	0.0000	0.0000	0.0000	0.0001	0.00003	0.00053	0.00000	3.3502

Offsite Dust - Mobile Sources			Emission Factors (g/mile)		Emission Factors (lb/mile)	
Source	Tier	Region	PM_{10}Dust	$PM_{2.5}$Dust	PM_{10}Dust	$PM_{2.5}$Dust
Passenger Vehicle - LDA (offsite)	--	Sacramento County	0.4263	0.1069	0.000940	0.000236
Light-Duty Truck - LDT2 (offsite)	--	Sacramento County	0.4272	0.1073	0.000942	0.000236
Med-Heavy Duty - T6 Utility (offsite)	--	Sacramento County	0.4642	0.1202	0.001023	0.000265
Heavy Duty Trucks - T7TC (offsite)	--	Sacramento County	0.4920	0.1299	0.001085	0.000286

Notes:

- Equipment list and engine sizes obtianed from client.
- Equipment criteria pollutant emission factors and load factors were obtained from CalEEMod, Appendix D 2020 and Ports Emissions Inventory Guidance, EPA, 2020.
- N_2O emission factors for equipment were obtained from *CFR Part 98 Table C-2 and CalEEMod Appendix D 2020.*
- CO_2 and CH_4 emission factors for construction equipment were obtained from *CalEEMod Appendix D 2020 and Ports Emissions Inventory Guidance, EPA, 2020.*
- Vehicle emissions factors obtained from EMFAC-2021