Appendix B.1
Air Emission Calculations

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SUMMARY OF OPERATIONAL EMISSIONS
Phillips 66 Santa Maria Rail Project

Source	Peak Day Emissions, lbs/day						
	ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	DPM
Fugitive Dust	-	-	-	-	1.32	0.20	-
Fugitives	4.00	-	-	-	-	-	-
Canister Emissions	2.24	-	-	-	-	-	-
Locomotives Onsite	24.18	21.18	214.05	2.92	8.15	7.90	8.15
Locomotives Offsite	28.00	34.13	346.64	1.60	16.00	15.52	0.00
Vehicles (autos & trucks)	0.12	1.65	2.11	0.00	0.07	0.07	0.07
Total Emissions at the Refinery	*30.43*	*21.18*	*214.05*	*2.92*	*9.47*	*8.10*	*8.15*
Total Emissions within SLOC	***58.55***	***56.97***	***562.80***	***4.52***	***25.54***	***23.68***	***8.22***

Source	Annual Emissions, tons/year						
	ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	DPM
Fugitive Dust	-	-	-	-	0.17	0.03	-
Fugitives	0.73	-	-	-	-	-	-
Canister Emissions	0.28	-	-	-	-	-	-
Locomotives Onsite	1.30	2.65	20.25	0.36	0.56	0.54	0.56
Locomotives Offsite	1.30	4.27	28.26	0.20	0.87	0.84	0.00
Vehicles (autos & trucks)	0.01	0.19	0.15	0.00	0.01	0.00	0.01
Total Emissions at the Refinery	*2.31*	*2.65*	*20.25*	*0.36*	*0.73*	*0.56*	*0.56*
Total Emissions within SLOC	***3.63***	***7.10***	***48.66***	***0.56***	***1.60***	***1.41***	***0.56***

SUMMARY OF OPERATIONAL MAINLINE RAIL EMISSIONS
Phillips 66 Santa Maria Rail Project

Route/Air District	Miles	Peak Day Emissions, lbs/day					
		ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$
Northern Route Via Oakland							
Placer	1.8	0.38	0.46	4.65	0.02	0.21	0.21
Sacramento Metro	30.8	6.44	7.85	79.69	0.37	3.68	3.57
Yolo Solano	64.2	13.41	16.35	166.05	0.77	7.66	7.43
Bay Area	276.9	57.82	70.49	715.87	3.30	33.04	32.05
Monterrey Bay	226.8	47.37	57.74	586.43	2.71	27.07	26.25
San Luis Obispo	134.1	28.00	34.13	346.64	1.60	16.00	15.52
Total	***734.6***	***153.41***	***187.01***	***1,899.34***	***8.77***	***87.66***	***85.03***
Total outside of SLOC	***600.5***	***125.4***	***152.9***	***1552.7***	***7.2***	***71.7***	***69.5***
Northern Route Via Altamont							
Placer	1.8	0.38	0.46	4.65	0.02	0.21	0.21
Sacramento Metro	75.8	15.83	19.29	195.94	0.90	9.04	8.77
San Joaquin Valley	100.3	20.95	25.54	259.34	1.20	11.97	11.61
Bay Area	179.6	37.50	45.72	464.34	2.14	21.43	20.79
Monterrey Bay	226.8	47.37	57.74	586.43	2.71	27.07	26.25
San Luis Obispo	134.1	28.00	34.13	346.64	1.60	16.00	15.52
Total	***718.3***	***150.02***	***182.88***	***1,857.35***	***8.57***	***85.72***	***83.15***
Total outside of SLOC	***584.3***	***122.0***	***148.7***	***1510.7***	***7.0***	***69.7***	***67.6***
Southern Route							
San Luis Obispo	9.5	1.99	2.43	24.67	0.11	1.14	1.10
Santa Barbara	216.4	45.19	55.09	559.54	2.58	25.83	25.05
Ventura	115.6	24.13	29.42	298.80	1.38	13.79	13.38
South Coast	176.2	36.79	44.85	455.55	2.10	21.03	20.39
Total	***517.7***	***108.11***	***131.80***	***1,338.56***	***6.18***	***61.78***	***59.93***
Total outside of SLOC	***508.1***	***106.1***	***129.4***	***1313.9***	***6.1***	***60.6***	***58.8***

Source	Miles	Annual Emissions, tons/year					
		ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$
Northern Route Via Oakland							
Placer	1.8	0.02	0.06	0.38	0.00	0.01	0.01
Sacramento Metro	30.8	0.30	0.98	6.50	0.05	0.20	0.19
Yolo Solano	64.2	0.62	2.04	13.54	0.10	0.42	0.40
Bay Area	276.9	2.68	8.81	58.37	0.41	1.79	1.74
Monterrey Bay	226.8	2.20	7.22	47.82	0.34	1.47	1.42
San Luis Obispo	134.1	1.30	4.27	28.26	0.20	0.87	0.84
Total	***734.6***	***7.12***	***23.38***	***154.87***	***1.10***	***4.75***	***4.61***
Total outside of SLOC	***600.5***	***5.8***	***19.1***	***126.6***	***0.9***	***3.9***	***3.8***
Northern Route Via Altamont							
Placer	1.8	0.02	0.06	0.38	0.00	0.01	0.01
Sacramento Metro	75.8	0.73	2.41	15.98	0.11	0.49	0.48
San Joaquin Valley	100.3	0.97	3.19	21.15	0.15	0.65	0.63
Bay Area	179.6	1.74	5.71	37.86	0.27	1.16	1.13
Monterrey Bay	226.8	2.20	7.22	47.82	0.34	1.47	1.42
San Luis Obispo	134.1	1.30	4.27	28.26	0.20	0.87	0.84
Total	***718.3***	***6.97***	***22.86***	***151.45***	***1.07***	***4.64***	***4.50***
Total outside of SLOC	***584.3***	***5.7***	***18.6***	***123.2***	***0.9***	***3.8***	***3.7***
Southern Route							
San Luis Obispo	9.5	0.09	0.30	2.01	0.01	0.06	0.06
Santa Barbara	216.4	2.10	6.89	45.62	0.32	1.40	1.36
Ventura	115.6	1.12	3.68	24.36	0.17	0.75	0.72
South Coast	176.2	1.71	5.61	37.14	0.26	1.14	1.10
Total	***517.7***	***5.02***	***16.47***	***109.14***	***0.77***	***3.35***	***3.25***
Total outside of SLOC	***508.1***	***4.9***	***16.2***	***107.1***	***0.8***	***3.3***	***3.2***

SUMMARY OF CONSTRUCTION EMISSIONS
Phillips 66 Santa Maria Rail Project

Source	Peak Day Emissions, lbs/day					
	ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$
Onsite: Construction Equipment	15.85	103.49	186.08	0.16	7.87	7.24
Onsite: Fugitive Dust	-	-	-	-	15.62	8.34
Offsite: Vehicles	3.11	32.68	35.62	0.07	0.63	0.58
Offsite: Fugitive Dust	0.00	0.00	0.00	0.00	3.16	0.00
Total	***18.95***	***136.18***	***221.69***	***0.23***	***27.28***	***16.15***
Source	**Peak Quarter Emissions, tons**					
	ROG	**CO**	**NO_x**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Onsite: Fugitive Dust	0.00	0.00	0.00	0.00	0.45	0.24
Onsite: Construction Equipment	0.41	2.72	4.82	0.03	0.20	0.19
Offsite: Fugitive Dust	0.00	0.00	0.00	0.00	0.03	0.03
Offsite: Vehicles	0.03	0.31	0.26	0.03	0.03	0.03
Total	***0.44***	***3.04***	***5.07***	***0.05***	***0.70***	***0.48***

Note: Peak quarter based on Grading, Soil Transportation and Rail Activities

SUMMARY OF GHG EMISSIONS WITHIN SLOC
Phillips 66 Santa Maria Rail Project

Source	CO_2 (MT)	CH_4 (MT)	N_2O (MT)	$MTCO_2E$
Construction Amortized	38.4	0.0	0.0	38.6
Fugitives	0.0	0.0	0.0	0.3
Locomotives onsite	800.1	0.1	0.0	807.7
Locomotives mainline within SLOC	1,472.0	0.1	0.0	1,486.0
Electricity	676.2	0.0	0.0	678.9
Vehicals (Cars and Trucks and sulfu	44.7	0.0	0.0	45.1
Project Total within SLOC	*3,031.3*	*0.2*	*0.1*	*3,056.6*
Project Total at the Refinery	*1,514.68*	*0.12*	*0.03*	*1,525.46*

Notes:

Trains per year	*250*	
Average 24-hour electrical load for lights and other equipment, kW	*50*	
Average electrical load during unlaoding operations, kW	*900*	*as per Applicant submittals*
Electrical Load during rail car heating (MWh/year)	*105*	
CO2 Intensity	*641.34*	*lbs/MWh*
CH4 Intensity	*0.029*	*lbs/MWh*
N2O Intensity	*0.006*	*lbs/MWh*

Intensity factors taken from CalEEMod2013 for PG&E

As per CARB speciation profile 297, methane is 0.088 fraction of crude oil TOG fugitives

SUMMARY OF MAINLINE GHG EMISSIONS
Phillips 66 Santa Maria Rail Project

Route	CO_2 (MT)	CH_4 (MT)	N_2O (MT)	$MTCO_2E$
Northern Route - via Oakland	8,504.6	0.7	0.2	8,585.7
Northern Route - via Altamont	8,326.3	0.7	0.2	8,405.7
Southern Route	6,123.3	0.5	0.2	6,181.7
Within California	15,009.5	1.2	0.4	15,152.7

Within California assumes the use of the northern route via Oakland to Washington State Border since this would provide the longest route within t

SUMMARY OF TOTAL GHG EMISSIONS
Phillips 66 Santa Maria Rail Project

Route	CO_2 (MT)	CH_4 (MT)	N_2O (MT)	$MTCO_2E$
Northern Route - via Oakland	10,063.9	0.8	0.2	10,156.3
Northern Route - via Altamont	9,885.6	0.8	0.2	9,976.3
Southern Route	7,682.6	0.6	0.2	7,752.3
Within California	16,568.9	1.3	0.4	16,723.3
Within United States	66,248.5	5.2	1.7	66,880.7

Within California assumes the use of the northern route via Oakland since this would provide the longest route within the State.

Within United States assumes route via the north to the Canadian border.

SLOAPCD Operational Thresholds for Emissions within SLOC

Pollutant	Daily	Annual	Project Daily	Project Annual
ROG + NOx	25 pounds	25 tons	621.3	52.3
Diesel Particulate Matter	1.25 pounds	-	24.2	-
Fugitive Dust Particulate Matter (PM_{10})	25 pounds	25 tons	1.32	0.17
CO	550 pounds	-	57.0	-

SLOAPCD Construction Thresholds

Pollutant	Daily	Quarterly Tier 1	Quarterly Tier 2	Project Daily	Project Quarterly
ROG + NOx	137 pounds	2.5 tons	6.3 tons	240.6	5.5
Diesel Particulate Matter	7 pounds	0.13 tons	0.32 tons	8.5	0.23
Fugitive Dust Particulate Matter (PM_{10})	-	2.5 tons	-	-	0.47

SLOAPCD Construction Thresholds Mitigated

Pollutant	Daily	Quarterly Tier 1	Quarterly Tier 2	Project Daily	Project Quarterly
ROG + NOx	137 pounds	2.5 tons	6.3 tons	153.3	3.0
Diesel Particulate Matter	7 pounds	0.13 tons	0.32 tons	4.9	0.12
Fugitive Dust Particulate Matter (PM_{10})	-	2.5 tons	-	-	0.20

Fugitive Dust from Road Operations
Phillips 66 Santa Maria Rail Project

ROAD INFORMATION	
Material Silt Content (%)	4.3
Material Moisture Content (%)	0.5
particle size multiplier, PM10, k	0.35
particle size multiplier, PM2.5, k	0.053
P, number of "wet" days per year (> 0.01 " rain)	0

VEHICLE INFORMATION	
Duration per Use (hr)	1
Use per week, days	5
Weeks per year	52
Mean Vehicle Speed (mph)	15

Pollutant	Dust Emission Factor (lbs/miles)	Emissions	
		Daily (lbs/day)	Annual (tons/yr)
PM10	0.088	1.3	0.172
PM2.5	0.013	0.2	0.025

Notes
Equation based on CalEEMod 2013 Appendix A: Calculation Details for CalEEMod
Assumes no precipitation during vehicle use
Material silt content default from URBEMIS
Materials moisture content default from URBEMIS
Assume use of rail road once per train arrival
15 mph assumed as a reasonable slow speed

FUGITIVE EMISSIONS
Phillips 66 Santa Maria Rail Project

Process/ System	Source Unit		No. of Proposed Components	Emission Factor (kg/hr/comp)	Daily Emission Rate (lb/day)	Annual Emission Rate (tons/yr)
Unit Train Cars	Flanges (ANSI 16.5-1988)		80	2.40E-05	1.01E-01	
	Pressure Relief Valves		20	1.90E-05	2.01E-02	
	Tank Car top Valve				2.05E-02	
		Total Emissions:			0.14	0.026
Train Cars Offloading Lines	Pumps -Double Mechanical Seals or Equivalent		20	2.65E-04	2.80E-01	
	Flanges (ANSI 16.5-1988)		820	2.40E-05	1.04E+00	
	Pressure Relief Valves		20	1.90E-05	2.01E-02	
	Process Drains with P-Trap or Seal Pot		20	1.31E-04	1.38E-01	
	Other (including fittings, hatches, sight-glasses, and		200	1.31E-04	1.38E+00	
		Total Emissions:			2.86	0.52
Offloading Collection Headers & Meters	Pumps -Double Mechanical Seals or Equivalent		2	2.65E-04	2.80E-02	
	Flanges (ANSI 16.5-1988)		380	2.40E-05	4.82E-01	
	Pressure Relief Valves		10	1.90E-05	1.00E-02	
	Process Drains with P-Trap or Seal Pot		20	1.31E-04	1.38E-01	
	Other (including fittings, hatches, sight-glasses, and		30	1.31E-04	2.08E-01	
		Total Emissions:			0.87	0.16
Drain & Crude Drain	Flanges (ANSI 16.5-1988)		83	2.40E-05	1.05E-01	
	Pressure Relief Valves		3	1.90E-05	3.01E-03	
		Total Emissions:			0.11	0.020
Delivery to Tank Farm	Flanges (ANSI 16.5-1988)		21	2.40E-05	2.66E-02	
	Pressure Relief Valves		1	1.90E-05	1.00E-03	
		Total Emissions:			0.03	0.0050
Unloading Carbon Canisters			1		2.24	0.28
TOTAL FUGITIVE EMISSIONS					6.24	1.01

Notes
Component counts based on Applicant submittals
Carbon canister calculation based on 1% vapor entrainment during pumping and flash calculations. See separate spreadsheet
Source:
California Air Pollution Control Officers Association. California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities. February 1999.

Tank car top valve based on open ended lines for 5 minutes per tank car during unloading
Modeling emission rate based on area source of 1000ft2, g/m2-s 0.00023

Canister ROG Emissions
based on SPEC Services calcualtions and Canister Manufactures Information

Crude Vaporization During Pumping Flowrate

Total Crude Flow	8,000	gpm
Entrained Vapor @ 0.0 PSIG	1%	
Total Vapor	80	gpm
Amount Released at 120 PSIG	10.91%	
	8.73	gpm
	1.17	SCFM

Air Entrainment

Total Air Removed/Railcar	15	ft3
Total Air Removed/Train	1200	ft3
Time to Connect 20 Railcars	50	min
Pump off Time/20 Railcars	60	min
Total Time	440	min
Air Flow Rate, avg per unit train	2.727	SCFM
Air Density	0.076	lb/ft3
Mass Flow, avg per unit car	0.209	lb/min

Crude Vaporization and Air Entrainment

Maximum, Instantaneous, estimated	500	SCFM
Normal	3.89	SCFM
Operating Time	7.3	hours/train
Crude vapor + air	1713	SCF/train

Normal Pressure	14.7	PSIA
Temperature, High, Dry Bulb	87	F
Temperature, High, Wet Bulb	64	F
Temperature, Low	32	F
Relative Humidity	50%	
Operating Temperature	68-104	F

Crude Vapor Mass Flow

MW	62.45	lb/lbmole
Density	0.1603	lb/ft3
Mass Flow (estimated)	0.19	lb/min

Mass Fraction by component, mass fraction based on crude flash modeling
Mass Fraction in the crude vapor. Crude vapor estimated at 500ppm total

Component	Mass Fraction in Crude Vapor	PPMV in Vapor to Canisters
Propane	0.0821	40.7
i-Butane	0.067	33.2
n-Butane	0.2046	101.4
i-Pentane	0.2602	128.9
n-Pentane	0.2187	108.4
n-Hexane	0.0847	42.0
n-Heptane	0.0149	7.4
n-Octane	0.0023	1.1
n-Nonane	0.0002	0.1
Benzene	0.0037	1.8
Toluene	0.0027	1.3
E-Benzene	0.0004	0.2
o-Xylene	0.0001	0.0
Cyclopentane	0.0128	6.3
Mcyclopentan	0.013	6.4
Cyclohexane	0.0206	10.2
Mcyclohexane	0.0115	5.7
H2S	0.0096	4.8

Emissions

Total ROG vapors, lbs/unit train	44.90
Canister fraction reduction eff	0.95
Total emissions, lbs/unit train	2.24

Total ROG vapors based on crude vapor mass flow and pumpoff time for 80 cars

LOCOMOTIVE EMISSIONS
Phillips 66 Santa Maria Rail Project

LOCOMOTIVE/TRIP INFORMATION			
Units/week	5	Total time onsite, hrs	11.5
Weeks per year	50	Switching time per engine unloading (hr)	2.58
Line Haul # engines/unit	3	Idling time per engine unloading (hr)	8.92
Line Haul Engine power (HP)	4300	Switching number of engines	2
Roundtrip Distance to SLOC Line (mi)	134	Switching power (hp)	4300
RT Distance SLOC Line to CA Border (mi)	1193	Switching load Factor	0.206
Average Line haul Speed, mph	40	Fraction Tier 0 Engines	0.9
Roundtrip Duration to SLOC Line (hr)	3.4	Fraction Tier 1 Engines	0.1
Roundtrip SLOC Line to CA Border (hr)	29.8	Idling number of engines, non-switching	1
Line Haul Load Factor	0.28	Idling time per engine, non-switching	1.08
SM to SLO Extra Engines Number	2	Switching time per engine, non-switching	0.69
SM to SLO Distance, RT miles	30	Idling fuel use, gal/hr	3.3
SM to SLO Time (20 mph), hrs	1.5	Fraction of switching emissions onsite	0.85
SM to SLO Load	0.18		

Source	Emission Factor (g/bhp-hr/engine)								
	ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	CO_2	CH_4	N_2O
Line Haul, Uncontr.	1.05	1.28	13.00	0.060	0.60	0.58	490.7	0.0385	0.0125
Line Haul, UP Avg	0.39	1.28	8.48	0.060	0.26	0.25	490.7	0.0385	0.0125
Switching, Uncontr.	2.21	1.83	17.40	0.060	0.72	0.70	671.5	0.0526	0.0171
Switching, UP Avg	0.80	1.83	12.06	0.060	0.34	0.33	671.5	0.0526	0.0171
	Emission Factor (g/hr/engine)								
	ROG	CO	NOx	SO2	PM10	PM25	CO_2	CH_4	N_2O
Idling	63	80	1064	56	27	26	33866	2.6544	0.8627

Source		Peak Day Emissions, lbs/day						Annual Emissions, tons/year or MT/yr for GHG									
		ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	CO_2	CH_4	N_2O	$MTCO_2E$
Within SLOC																	
Line Haul		28.01	34.14	346.74	1.60	16.00	15.52	1.30	4.27	28.27	0.20	0.87	0.84	1,472.40	0.12	0.04	1,486.45
Line Haul SM/SLO		5.34	6.51	66.12	0.31	3.05	2.96	0.25	0.81	5.39	0.04	0.17	0.16	439.20	0.03	0.01	443.39
Switching		25.23	20.89	198.66	0.69	8.22	7.97	1.14	2.61	17.21	0.09	0.49	0.47	761.30	0.06	0.02	768.56
Idling		2.62	3.33	44.33	2.33	1.12	1.09	0.33	0.42	5.54	0.29	0.14	0.14	149.67	0.01	0.00	151.09
Total		*61.20*	*64.88*	*655.85*	*4.92*	*28.40*	*27.55*	*3.02*	*8.11*	*56.42*	*0.62*	*1.66*	*1.61*	*2,822.56*	*0.22*	*0.07*	*2,849.50*
Onsite Rail		24.18	21.18	214.05	2.92	8.15	7.90	1.30	2.65	20.25	0.36	0.56	0.54	800.08	0.06	0.02	807.72
By District to Switch Yards																	
Northern Route - via Oakland	***Miles RT***																
Placer	1.8	0.38	0.46	4.65	0.02	0.21	0.21	0.02	0.06	0.38	0.00	0.01	0.01	19.76	0.00	0.00	19.95
Sacramento Metro	30.8	6.44	7.85	79.69	0.37	3.68	3.57	0.30	0.98	6.50	0.05	0.20	0.19	338.40	0.03	0.01	341.63
Yolo Solano	64.2	13.41	16.35	166.05	0.77	7.66	7.43	0.62	2.04	13.54	0.10	0.42	0.40	705.13	0.06	0.02	711.86
Bay Area	276.9	57.82	70.49	715.87	3.30	33.04	32.05	2.68	8.81	58.37	0.41	1.79	1.74	3,039.89	0.24	0.08	3,068.90
Monterrey Bay	226.8	47.37	57.74	586.43	2.71	27.07	26.25	2.20	7.22	47.82	0.34	1.47	1.42	2,490.24	0.20	0.06	2,514.00
San Luis Obispo	134.1	28.00	34.13	346.64	1.60	16.00	15.52	1.30	4.27	28.26	0.20	0.87	0.84	1,471.96	0.12	0.04	1,486.01
Total	*734.6*	*153.41*	*187.01*	*1,899.34*	*8.77*	*87.66*	*85.03*	*7.12*	*23.38*	*154.87*	*1.10*	*4.75*	*4.61*	*8,065.39*	*0.63*	*0.21*	*8,142.35*
Total outside of SLOC	*600.5*	*125.4*	*152.9*	*1552.7*	*7.2*	*71.7*	*69.5*	*5.8*	*19.1*	*126.6*	*0.9*	*3.9*	*3.8*	*6593.4*	*0.5*	*0.2*	*6,656.34*
Northern Route - via Altamont	***Miles RT***																
Placer	1.8	0.38	0.46	4.65	0.02	0.21	0.21	0.02	0.06	0.38	0.00	0.01	0.01	19.76	0.00	0.00	19.95
Sacramento Metro	75.8	15.83	19.29	195.94	0.90	9.04	8.77	0.73	2.41	15.98	0.11	0.49	0.48	832.06	0.07	0.02	840.00
San Joaquin Valley	100.3	20.95	25.54	259.34	1.20	11.97	11.61	0.97	3.19	21.15	0.15	0.65	0.63	1,101.28	0.09	0.03	1,111.79
Bay Area	179.6	37.50	45.72	464.34	2.14	21.43	20.79	1.74	5.71	37.86	0.27	1.16	1.13	1,971.77	0.15	0.05	1,990.58
Monterrey Bay	226.8	47.37	57.74	586.43	2.71	27.07	26.25	2.20	7.22	47.82	0.34	1.47	1.42	2,490.24	0.20	0.06	2,514.00
San Luis Obispo	134.1	28.00	34.13	346.64	1.60	16.00	15.52	1.30	4.27	28.26	0.20	0.87	0.84	1,471.96	0.12	0.04	1,486.01
Total	*718.3*	*150.02*	*182.88*	*1,857.35*	*8.57*	*85.72*	*83.15*	*6.97*	*22.86*	*151.45*	*1.07*	*4.64*	*4.50*	*7,887.07*	*0.62*	*0.20*	*7,962.34*
Total outside of SLOC	*584.3*	*122.0*	*148.7*	*1510.7*	*7.0*	*69.7*	*67.6*	*5.7*	*18.6*	*123.2*	*0.9*	*3.8*	*3.7*	*6415.1*	*0.5*	*0.2*	*6,476.33*
Southern Route	***Miles RT***																
San Luis Obispo	9.5	1.99	2.43	24.67	0.11	1.14	1.10	0.09	0.30	2.01	0.01	0.06	0.06	104.75	0.01	0.00	105.75
Santa Barbara	216.4	45.19	55.09	559.54	2.58	25.83	25.05	2.10	6.89	45.62	0.32	1.40	1.36	2,376.05	0.19	0.06	2,398.72
Ventura	115.6	24.13	29.42	298.80	1.38	13.79	13.38	1.12	3.68	24.36	0.17	0.75	0.72	1,268.84	0.10	0.03	1,280.94
South Coast	176.2	36.79	44.85	455.55	2.10	21.03	20.39	1.71	5.61	37.14	0.26	1.14	1.10	1,934.44	0.15	0.05	1,952.90
Total	*517.7*	*108.11*	*131.80*	*1,338.56*	*6.18*	*61.78*	*59.93*	*5.02*	*16.47*	*109.14*	*0.77*	*3.35*	*3.25*	*5,684.07*	*0.45*	*0.14*	*5,738.31*
Total outside of SLOC	*508.1*	*106.1*	*129.4*	*1313.9*	*6.1*	*60.6*	*58.8*	*4.9*	*16.2*	*107.1*	*0.8*	*3.3*	*3.2*	*5579.3*	*0.4*	*0.1*	*5,632.56*
Within California																	
Mainline Rail		282.48	344.35	3,497.32	16.14	161.41	156.57	13.11	43.04	285.17	2.02	8.74	8.48	15,009.51	1.18	0.38	15,152.74
Project Total		310.33	368.58	3,740.31	19.16	170.76	165.63	14.58	46.07	307.92	2.39	9.37	9.09	15,920.47	1.25	0.41	16,072.40
Mainline Rail Outside SLO County		249.13	303.70	3,084.46	14.24	142.36	138.09	11.57	37.96	251.50	1.78	7.71	7.48	13,097.91	1.03	0.33	13,222.90

Locomotive Emissions Notes

Notes:

Peak day assumes worst emissions from Tier0 or Tier1 engines, plus Line haul SM/SLO, plus worst case of Tier0 or Tier1 Switching, plus idling.
Duration used in the evaluation is the total time of train travel from the project site to the SLO boundary at the given speed.
Locomotives assumed to use the higher sulfur diesel as they come from out of state.
Peak day is assumed to be all 3 locomotive are uncontrolled. UP data indicates 25% of their locomotive fleet is uncontrolled (in 2009).
Annual emissions assume an fleet mix average based on UP fleet mix and EPA 2009 factors.
Emission factors for peak day are the worst of the EPA uncontrolled factor (EPA 2009) or the Carl Moyer Tier 0 factors from 1998 (adjusted to higher sulfur diesel).
The worst factors are from EPA data for NOx and Carl Moyer adjusted for PM and ROG.
CO emission factors based on EPA 2009.
Idling emission factors and fuel use based on CARB Preliminary Draft Locomotive Inventory Memo and the BAH 1992 report for a 16-710G3 engine.
PM2.5/PM10 ratio based on 0.97 from EPA study, 2009.
SO2 factor based on combined ULSD and out-of-state diesel (350ppm) as per Port of LA Calculations, 2011.
Emission factors for GHG based on kg/gallon. Conversion based on EPA 2009 (20.8 for line haul, 15.2 switching - bhp-hr/gal and 10.2065 CO2 kg/gallon).
The 10.2065 CO2 kg/gallon conversion is derived from the CARB mandatory reporting rule for diesel #2.
GHG Emissions tabulated in metric tonnes.
Locomotive load factor based on POLA 2011, and POS 2011.
Locomotive speed based on POLB 2008 of 40 mph.
Estimated switching locomotive fuel use of --> 1585 gallons per week, using EPA 2009 factor of 15.2 bhp-hr/gallon.
Rail distance based on UP rail line maps and data provided by UPRR.
Total round trip distance within CA for the UP northern route (through Reno) is longer than the Southern Route (through Yuma) by about only 2 miles.
Switching time based on information provided in Project Description.
Line Haul SM/SLO are the additional engines required between Santa Margarita and SLO for the Cuesta Grade.
SM to SLO Grade would add 2 engines, operating under dynamic braking (2.1% load) coming downhill (11.7miles), standard 28% load uphill (3.3 miles) and a standard 28% load returning (15 miles) for an average of 18% load.
Switching load factor based on EPA 1998 for switching, with idling portion removed.
Some switching emissions occur offsite along the mainline track siding.

Sources:

Booz-Allen Hamilton, 1992 Report on Locomotive Emission Inventory: Locomotive Emissions by County. August 1992.
EPA 2009, United States Environmental Protection Agency. Emission Factors for Locomotives. Office of Transportation and Air Quality. EPA-420-F-09-025.April 2009.
EPA 1998, Locomotive Emission Standards-Regulatory Support Doucment, EPA, April 1998 (EPA-420-R-98-101)
CARB, Carl Moyer Program Guidelines 2011 for Locomotives
POS 20011, Carbon Footprint Study for the Asia to North America Intermodal Trade, Port of Seattle (POS), June, 2011
POLA 2011, Port of Los Angeles Inventory of Air Emissions 2010, Port of Los Angeles, July 2011
POLB 2008, Port of Long Beach
CARB Preliminary Draft, Locomotive Emission Inventory, http://www.arb.ca.gov/msei/offroad/techmemo/locomotive_memo_2.pdf

Rail Emissions to the State Line

			Peak Day Emissions, lbs/day						Annual Emissions, tons/year or MT/yr for GHG									
Air District	County	One-way Distance	ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	CO_2	CH_4	N_2O	$MTCO_2E$
Colton to Nevada																		
SCAQMD	San Bernardino	21.2	8.9	10.8	109.8	0.5	5.1	4.9	0.4	1.4	9.0	0.1	0.3	0.3	466	0.04	0.01	471
Mojave	San Bernardino	200.8	83.9	102.2	1038.4	4.8	47.9	46.5	3.9	12.8	84.7	0.6	2.6	2.5	4410	0.35	0.11	4,452
Total		222.0	92.7	113.1	1148.3	5.3	53.0	51.4	4.3	14.1	93.6	0.7	2.9	2.8	4876	0.38	0.12	4,922
Roseville to Nevada																		
Placer	Placer	88.3	36.9	45.0	456.6	2.1	21.1	20.4	1.7	5.6	37.2	0.3	1.1	1.1	1939	0.15	0.05	1,958
Nevada	Nevada	29.5	12.3	15.0	152.6	0.7	7.0	6.8	0.6	1.9	12.4	0.1	0.4	0.4	648	0.05	0.02	654
Total		117.8	49.2	60.0	609.2	2.8	28.1	27.3	2.3	7.5	49.7	0.4	1.5	1.5	2587	0.20	0.07	2,612
Roseville to Oregon																		
Placer	Placer	22.3	9.3	11.4	115.4	0.5	5.3	5.2	0.4	1.4	9.4	0.1	0.3	0.3	490	0.04	0.01	495
Feather River	Sutter	10.5	4.4	5.3	54.0	0.2	2.5	2.4	0.2	0.7	4.4	0.0	0.1	0.1	229	0.02	0.01	232
	Yuba	15.9	6.6	8.1	82.2	0.4	3.8	3.7	0.3	1.0	6.7	0.0	0.2	0.2	349	0.03	0.01	352
Butte	Butte	45.7	19.1	23.3	236.2	1.1	10.9	10.6	0.9	2.9	19.3	0.1	0.6	0.6	1003	0.08	0.03	1,012
Tehama	Tehama	40.6	16.9	20.7	209.8	1.0	9.7	9.4	0.8	2.6	17.1	0.1	0.5	0.5	891	0.07	0.02	899
Shasta	Shasta	71.9	30.0	36.6	371.9	1.7	17.2	16.7	1.4	4.6	30.3	0.2	0.9	0.9	1579	0.12	0.04	1,594
Siskiyou	Siskiyou	89.4	37.3	45.5	462.1	2.1	21.3	20.7	1.7	5.7	37.7	0.3	1.2	1.1	1962	0.15	0.05	1,981
Total		296.2	123.7	150.8	1531.7	7.1	70.7	68.6	5.7	18.9	124.9	0.9	3.8	3.7	6504	0.51	0.17	6,566

Locomotive Timing Calculations

engine hours: based on Rail Sequencing spreadsheet rev6, Option A

Total Engine-hours	Activity/location
0.28	Arrival-mainline:switching (1 engine)
0.57	Arrival-east of rack;switching (2 engine)
0.48	Arrival-west of rack:switching (3 engines)
0.85	Positioning -east of rack: switching (2 engines)
1.14	Positioning-east of rack: idle (2 engines)
0.21	Postioning-west of rack:switching (2 engines)
0.26	Positioning-west of rack: idle (2 engines)
1.17	Unloading-rack 1: switch (all west of rack)
6.83	Unloading-rack 1: idle (all west of rack)
0.00	Unloading-rack 1:off (all west of rack)
1.17	Unloading-rack 2: switch (all west of rack)
6.83	Unloading-rack 2: idle (all west of rack)
0.00	Unloading-rack 2:off (all west of rack)
0.00	3rd engine-switching east of rack
0.08	3rd engine-switiching west of rack
1.08	3rd engine-idle west of rack
9.73	3rd engine-off west of rack
2.77	Pre-Departure-idling (all west of rack)(2 engines)
0.00	Pre-Departure-off (all west of rack)(2 engines)
0.57	Departure-running switching (2 engines)
0.00	Departure-switching east of rack (1 engine)
0.48	Departure-switching west of rack (3 engines)
0.15	Fraction Switching offsite
0.85	Fraction Switching onsite
0.85	Total Offsite Switching
5.00	Total Onsite Switching
18.92	Total idling
9.73	Total off
34.50	Total
0.28	Fraction of onsite switching east of rack
0.06	Fraction of idling east of rack
0.24	Fraction of all switching east of rack
0.06	Fraction of idling east of rack
2.58	Engine 1 & 2 switching, per engine
8.92	Engine 1 & 2 idling, per engine
0.69	Engine 3 switching
1.08	Engine 3 idling

OFFSITE EMISSIONS OPERATIONS
Phillips 66 Santa Maria Rail Project

						Emission Factors (g/mile)								
Phase Name	Vehicle Code	Peak Day Trip Number	Daily Trip Number	Distance, Miles, RT	Days of Activity	ROG	CO	NO_x	SO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4	N_2O
Operations														
Autos	LDA-g	12	12	26	260	0.067	1.820	0.202	0.000	0.002	0.002	292.2	0.023	0.012
Trucks	T7tc-d55	1	0.38	26	260	0.443	2.354	11.493	0.000	0.426	0.392	1584.4	0.026	0.024
Sulfur trucks	T7tc-d55	2	1.19	26	260	0.443	2.354	11.493	0.000	0.426	0.392	1584.4	0.026	0.024
Total														

	Peak Day Emissions (lbs/day)						Total Emissions (tons)									
Phase Name	ROG	CO	NO_x	SO_X	PM_{10}	$PM_{2.5}$	ROG	CO	NO_x	SO_X	PM_{10}	$PM_{2.5}$	CO_2	CH_4	N_2O	$MTCO_2E$
Operations																
Autos	0.05	1.25	0.14	0.00	0.00	0.00	0.01	0.16	0.02	0.00	0.00	0.00	26.1	0.0021	0.0011	26.5
Trucks	0.03	0.13	0.66	0.00	0.02	0.02	0.00	0.01	0.03	0.00	0.00	0.00	4.5	7E-05	7E-05	4.6
Sulfur Trucks	0.05	0.27	1.32	0.00	0.05	0.04	0.00	0.02	0.10	0.00	0.00	0.00	14.0	0.0002	0.0002	14.1
Total	0.12	1.65	2.11	0.00	0.07	0.07	0.01	0.19	0.15	0.00	0.01	0.00	44.66	0.00	0.00	45.15

Notes
Emission factors from EMFAC2011 for aggregate year 2013
Peak number of trips based on Applicant submittals
Distance based on CalEEMod 2013 for SLO County rural
Days of activity based on Applicant submittals along with CalEEMod 22 work days per month
Operations trucks based on 2 per week for 50 weeks

SUMMARY OF MITIGATED OPERATIONAL EMISSIONS
Phillips 66 Santa Maria Rail Project

Source	Peak Day Emissions, lbs/day						
	ROG	CO	NOx	SO2	PM10	PM25	DPM
Fugitive Dust	-	-	-	-	1.32	0.20	-
Fugitives	4.00	-	-	-	-	-	-
Canister Emissions	2.24	-	-	-	-	-	-
Locomotives Onsite	2.37	19.13	29.67	1.48	0.72	0.70	0.72
Locomotives Offsite	3.73	40.00	34.66	1.60	0.80	0.78	0.00
Vehicles (autos & trucks)	0.12	1.65	2.11	0.00	0.07	0.07	0.07
Total Emissions at the SMR	8.62	19.13	29.67	1.48	2.05	0.90	0.72
Total Emissions within SLOC	***12.47***	***60.78***	***66.45***	***3.08***	***2.92***	***1.74***	***0.80***

Source	Annual Emissions, tons/year						
	ROG	CO	NOx	SO2	PM10	PM25	DPM
Fugitive Dust	-	-	-	-	0.17	0.03	-
Fugitives	0.73	-	-	-	-	-	-
Canister Emissions	0.28	-	-	-	-	-	-
Locomotives Onsite	0.22	2.39	3.34	0.18	0.07	0.07	0.07
Locomotives Offsite	0.13	4.27	3.33	0.20	0.05	0.05	0.00
Vehicles (autos & trucks)	0.01	0.19	0.15	0.00	0.01	0.00	0.01
Total Emissions at the SMR	1.23	2.39	3.34	0.18	0.24	0.10	0.07
Total Emissions within SLOC	***1.38***	***6.85***	***6.83***	***0.38***	***0.30***	***0.15***	***0.08***

Note: DPM emissions at the SMR without Tier 4 locomotives = 7.45 lbs/day

SUMMARY OF MITIGATED OPERATIONAL MAINLINE RAIL EMISSIONS
Phillips 66 Santa Maria Rail Project

Route/Air District	Miles	Peak Day Emissions, lbs/day					
		ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$
Northern Route Via Oakland							
Placer	1.8	0.05	0.54	0.47	0.02	0.01	0.01
Sacramento Metro	30.8	0.86	9.20	7.97	0.37	0.18	0.18
Yolo Solano	64.2	1.79	19.16	16.61	0.77	0.38	0.37
Bay Area	276.9	7.71	82.60	71.59	3.30	1.65	1.60
Monterrey Bay	226.8	6.32	67.67	58.64	2.71	1.35	1.31
San Luis Obispo	134.1	3.73	40.00	34.66	1.60	0.80	0.78
Total	***734.6***	***20.45***	***219.15***	***189.93***	***8.77***	***4.38***	***4.25***
Total outside SLOC	***600.5***	***16.72***	***179.16***	***155.27***	***7.17***	***3.58***	***3.48***
Northern Route Via Altamont							
Placer	1.8	0.05	0.54	0.47	0.02	0.01	0.01
Sacramento Metro	75.8	2.11	22.61	19.59	0.90	0.45	0.44
San Joaquin Valley	100.3	2.79	29.92	25.93	1.20	0.60	0.58
Bay Area	179.6	5.00	53.58	46.43	2.14	1.07	1.04
Monterrey Bay	226.8	6.32	67.67	58.64	2.71	1.35	1.31
San Luis Obispo	134.1	3.73	40.00	34.66	1.60	0.80	0.78
Total	***718.3***	***20.00***	***214.31***	***185.73***	***8.57***	***4.29***	***4.16***
Total outside SLOC	***584.3***	***16.27***	***174.31***	***151.07***	***6.97***	***3.49***	***3.38***
Southern Route							
San Luis Obispo	9.5	0.27	2.85	2.47	0.11	0.06	0.06
Santa Barbara	216.4	6.03	64.56	55.95	2.58	1.29	1.25
Ventura	115.6	3.22	34.48	29.88	1.38	0.69	0.67
South Coast	176.2	4.91	52.56	45.55	2.10	1.05	1.02
Total	***517.7***	***14.42***	***154.45***	***133.86***	***6.18***	***3.09***	***3.00***
Total outside SLOC	***508.1***	***14.15***	***151.60***	***131.39***	***6.06***	***3.03***	***2.94***

Source	Miles	Annual Emissions, tons/year					
		ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$
Northern Route Via Oakland							
Placer	1.8	0.00	0.06	0.04	0.00	0.00	0.00
Sacramento Metro	30.8	0.03	0.98	0.77	0.05	0.01	0.01
Yolo Solano	64.2	0.06	2.04	1.60	0.10	0.02	0.02
Bay Area	276.9	0.28	8.81	6.88	0.41	0.10	0.10
Monterrey Bay	226.8	0.23	7.22	5.64	0.34	0.08	0.08
San Luis Obispo	134.1	0.13	4.27	3.33	0.20	0.05	0.05
Total	***734.6***	***0.73***	***23.38***	***18.26***	***1.10***	***0.27***	***0.27***
Total outside SLOC	***600.5***	***0.60***	***19.11***	***14.93***	***0.90***	***0.22***	***0.22***
Northern Route Via Altamont							
Placer	1.8	0.00	0.06	0.04	0.00	0.00	0.00
Sacramento Metro	75.8	0.08	2.41	1.88	0.11	0.03	0.03
San Joaquin Valley	100.3	0.10	3.19	2.49	0.15	0.04	0.04
Bay Area	179.6	0.18	5.71	4.46	0.27	0.07	0.06
Monterrey Bay	226.8	0.23	7.22	5.64	0.34	0.08	0.08
San Luis Obispo	134.1	0.13	4.27	3.33	0.20	0.05	0.05
Total	***718.3***	***0.71***	***22.86***	***17.86***	***1.07***	***0.27***	***0.26***
Total outside SLOC	***584.3***	***0.58***	***18.59***	***14.53***	***0.87***	***0.22***	***0.21***
Southern Route							
San Luis Obispo	9.5	0.01	0.30	0.24	0.01	0.00	0.00
Santa Barbara	216.4	0.22	6.89	5.38	0.32	0.08	0.08
Ventura	115.6	0.11	3.68	2.87	0.17	0.04	0.04
South Coast	176.2	0.18	5.61	4.38	0.26	0.07	0.06
Total	***517.7***	***0.51***	***16.47***	***12.87***	***0.77***	***0.19***	***0.19***
Total outside SLOC	***508.1***	***0.51***	***16.17***	***12.63***	***0.76***	***0.19***	***0.18***

SUMMARY OF MITIGATED CONSTRUCTION EMISSIONS
Phillips 66 Santa Maria Rail Project

Source	Peak Day Emissions, lbs/day					
	ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$
Onsite: Construction Equipment	15.85	103.49	186.08	0.16	7.87	7.24
Onsite: Fugitive Dust	-	-	-	-	15.62	8.34
Offsite: Vehicles	3.11	32.68	35.62	0.07	0.63	0.58
Offsite: Fugitive Dust	0.00	0.00	0.00	0.00	3.16	0.00
Total	18.95	136.18	221.69	0.23	27.28	16.15
Source	Peak Quarter Emissions, tons					
	ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$
Onsite: Fugitive Dust	0.00	0.00	0.00	0.00	0.45	0.24
Onsite: Construction Equipment	0.41	2.72	4.82	0.03	0.20	0.19
Offsite: Fugitive Dust	0.00	0.00	0.00	0.00	0.03	0.03
Offsite: Vehicles	0.03	0.31	0.26	0.03	0.03	0.03
Total	0.44	3.04	5.07	0.05	0.70	0.48

Note: Peak quarter based on Grading, Soil Transportation and Rail Activities

SUMMARY OF MITIGATED GHG EMISSIONS WITH THE REFINERY
(excludes mainline rail emissions)
Phillips 66 Santa Maria Rail Project

Source	CO_2 (MT)	CH_4 (MT)	N_2O (MT)	$MTCO_2E$
Construction Amortized	38.40	0.01	0.00	38.61
Fugitives	0.00	0.01	0.00	0.28
Locomotives onsite	800.08	0.06	0.02	807.72
Locomotives offsite	2,022.48	0.16	0.05	2,041.78
Electricity	676.20	0.03	0.01	678.86
Offsite	44.66	0.00	0.00	45.15
Project Total at the Refinery	*1,559.34*	*0.12*	*0.03*	*1,570.60*

Notes:

Trains per year	*250*	
Average 24-hour electrical load for lights and other equipment, kW	*50*	
Average electrical load during unlaoding operations, kW	*900*	*as per Applicant submittals*
Electrical Load during rail car heating (MWh/year)	*105*	
CO2 Intensity	*641.34*	*lbs/MWh*
CH4 Intensity	*0.029*	*lbs/MWh*
N2O Intensity	*0.006*	*lbs/MWh*

Intensity factors taken from CalEEMod2013 for PG&E
As per CARB speciation profile 297, methane is 0.088 fraction of crude oil TOG fugitives

SUMMARY OF MITIGATED MAINLINE GHG EMISSIONS
Phillips 66 Santa Maria Rail Project

Route	CO_2 (MT)	CH_4 (MT)	N_2O (MT)	$MTCO_2E$
Northern Route - via Oakland	8,504.58	0.67	0.22	8,585.74
Northern Route - via Altamont	8,326.27	0.65	0.21	8,405.73
Southern Route	6,123.26	0.45	0.14	5,738.31
Within California	15,009.51	1.18	0.38	15,152.74

Within California assumes the use of the northern route via Oakland to Washington State Border since this would provide the longest route with

SUMMARY OF TOTAL GHG EMISSIONS
Phillips 66 Santa Maria Rail Project

Route	CO_2 (MT)	CH_4 (MT)	N_2O (MT)	$MTCO_2E$
Northern Route - via Oakland	10,063.9	0.8	0.2	10,156.3
Northern Route - via Altamont	9,885.6	0.8	0.2	9,976.3
Southern Route	7,682.6	0.6	0.2	7,752.3
Within California	16,568.9	1.3	0.4	16,723.3
Within United States	66,248.5	5.2	1.7	66,880.7

Within California assumes the use of the northern route via Oakland since this would provide the longest route within the State.
Within United States assumes route via the north to the Canadian border.

SLOAPCD Operational Thresholds

Pollutant	Daily	Annual	Project Daily	Project Annual
ROG + NOx	25 pounds	25 tons	78.9	8.2
Diesel Particulate Matter	1.25 pounds	-	1.60	-
Fugitive Dust Particulate Matter (PM_{10})	25 pounds	25 tons	1.32	0.17
CO	550 pounds	-	60.8	-

SLOAPCD Construction Thresholds

Pollutant	Daily	Quarterly Tier 1	Quarterly Tier 2	Project Daily	Project Quarterly
ROG + NOx	137 pounds	2.5 tons	6.3 tons	240.64	5.51
Diesel Particulate Matter	7 pounds	0.13 tons	0.32 tons	8.5	0.23
Fugitive Dust Particulate Matter (PM_{10})	-	2.5 tons	-	-	0.47

SLOAPCD Construction Thresholds Mitigated

Pollutant	Daily	Quarterly Tier 1	Quarterly Tier 2	Project Daily	Project Quarterly
ROG + NOx	137 pounds	2.5 tons	6.3 tons	153.33	2.96
Diesel Particulate Matter	7 pounds	0.13 tons	0.32 tons	4.9	0.12
Fugitive Dust Particulate Matter (PM_{10})	-	2.5 tons	-	-	0.20

Locomotive Timing Calculations (Mitigated)

engine hours: based on Rail Sequencing spreadsheet rev6, Option A
Assumes limiting idle time to no more than 15 minutes.

Total Engine-hours	Activity/location
0.28	Arrival-mainline:switching (1 engine)
0.57	Arrival-east of rack;switching (2 engine)
0.48	Arrival-west of rack:switching (3 engines)
0.85	Positioning -east of rack: switching (2 engines)
1.14	Positioning-east of rack: idle (2 engines)
0.21	Postioning-west of rack:switching (2 engines)
0.26	Positioning-west of rack: idle (2 engines)
1.17	Unloading-rack 1: switch (all west of rack)
1.00	Unloading-rack 1: idle (all west of rack)
5.83	Unloading-rack 1:off (all west of rack)
1.17	Unloading-rack 2: switch (all west of rack)
1.00	Unloading-rack 2: idle (all west of rack)
5.83	Unloading-rack 2:off (all west of rack)
0.00	3rd engine-switching east of rack
0.08	3rd engine-switiching west of rack
1.08	3rd engine-idle west of rack
9.73	3rd engine-off west of rack
2.77	Pre-Departure-idling (all west of rack)(2 engines)
0.00	Pre-Departure-off (all west of rack)(2 engines)
0.57	Departure-running switching (2 engines)
0.00	Departure-switching east of rack (1 engine)
0.48	Departure-switching west of rack (3 engines)
0.15	Fraction Switching offsite
0.85	Fraction Switching onsite
0.85	Total Offsite Switching
5.00	Total Onsite Switching
7.25	Total idling
21.40	Total off
34.50	Total
0.28	Fraction of onsite switching east of rack
0.16	Fraction of idling east of rack
0.24	Fraction of all switching east of rack
0.16	Fraction of idling east of rack
2.58	Engine 1 & 2 switching, per engine
3.08	Engine 1 & 2 idling, per engine
0.69	Engine 3 switching
1.08	Engine 3 idling

LOCOMOTIVE EMISSIONS Mitigated
Phillips 66 Santa Maria Rail Project

LOCOMOTIVE/TRIP INFORMATION			
Units/week	5	Total time onsite, hrs	11.5
Weeks per year	50	Switching time per engine unloading (hr)	2.58
Line Haul # engines/unit	3	Idling time per engine unloading (hr)	3.08
Line Haul Engine power (HP)	4300	Switching number of engines	2
Roundtrip Distance to SLOC Line (mi)	134	Switching power (hp)	4300
RT Distance SLOC Line to CA Border (mi)	1193	Switching load Factor	0.206
Average Line haul Speed, mph	40	Fraction Tier 0 Engines	0
Roundtrip Duration to SLOC Line (hr)	3.35	Fraction Tier 1 Engines	0
Roundtrip SLOC Line to CA Border (hr)	29.8225	Idling number of engines, non-switching	1
Line Haul Load Factor	0.28	Idling time per engine, non-switching	1.08
SM to SLO Extra Engines Number	2	Switching time per engine, non-switching	0.69
SM to SLO Distance, RT miles	30	Idling fuel use, gal/hr	3.3
SM to SLO Time (20 mph), hrs	1.5	Fraction of switching emissions onsite	0.85
SM to SLO Load	0.18		

	Emission Factor (g/bhp-hr/engine)								
Source	ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	CO_2	CH_4	N_2O
Line Haul, Tier 4, max	0.14	1.50	1.30	0.060	0.030	0.029	490.7	0.0385	0.0125
Line Haul, Tier 4, avg	0.04	1.28	1.00	0.060	0.015	0.015	490.7	0.0385	0.0125
Switching, Tier 4, max	0.14	1.83	1.30	0.060	0.030	0.029	671.5	0.0526	0.0171
Switching, Tier 4, avg	0.08	1.83	1.00	0.060	0.015	0.015	671.5	0.0526	0.0171
	Emission Factor (g/hr/engine)								
	ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	CO_2	CH_4	N_2O
Idling	63	80	1064	56	27	26	33866	2.6544	0.8627

		Peak Day Emissions, lbs/day						Annual Emissions, tons/year or MT/yr for GHG									
Source		ROG	CO	NO_x	SO_2	PM_{10}	$PM_{2.5}$	ROG	CO	NOx	SO2	PM10	PM25	CO_2	CH_4	N_2O	$MTCO_2E$
Within SLOC																	
Line Haul		3.73	40.01	34.67	1.60	0.80	0.78	0.13	4.27	3.33	0.20	0.05	0.05	1,472.40	0.12	0.04	1,486.45
Line Haul SM/SLO		0.71	7.63	6.61	0.31	0.15	0.15	0.03	0.81	0.64	0.04	0.01	0.01	439.20	0.03	0.01	443.39
Switching		1.60	20.89	14.84	0.69	0.34	0.33	0.11	2.61	1.43	0.09	0.02	0.02	761.30	0.06	0.02	768.56
Idling		1.01	1.28	16.99	0.89	0.43	0.42	0.13	0.16	2.12	0.11	0.05	0.05	51.76	0.00	0.00	52.26
Total		7.05	69.81	73.12	3.48	1.73	1.67	0.40	7.85	7.52	0.44	0.13	0.13	2,724.66	0.21	0.07	2,750.66
Onsite Rail		2.37	19.13	29.67	1.48	0.72	0.70	0.22	2.39	3.34	0.18	0.07	0.07	702.18	0.06	0.02	708.88
By District Outside of SLOC to Switch Yards																	
Northern Route - via Oakland	***Miles RT***																
Placer	1.8	0.05	0.54	0.47	0.02	0.01	0.01	0.00	0.06	0.04	0.00	0.00	0.00	19.76	0.00	0.00	19.95
Sacramento Metro	30.8	0.86	9.20	7.97	0.37	0.18	0.18	0.03	0.98	0.77	0.05	0.01	0.01	338.40	0.03	0.01	341.63
Yolo Solano	64.2	1.79	19.16	16.61	0.77	0.38	0.37	0.06	2.04	1.60	0.10	0.02	0.02	705.13	0.06	0.02	711.86
Bay Area	276.9	7.71	82.60	71.59	3.30	1.65	1.60	0.28	8.81	6.88	0.41	0.10	0.10	3,039.89	0.24	0.08	3,068.90
Monterrey Bay	226.8	6.32	67.67	58.64	2.71	1.35	1.31	0.23	7.22	5.64	0.34	0.08	0.08	2,490.24	0.20	0.06	2,514.00
San Luis Obispo	134.1	3.73	40.00	34.66	1.60	0.80	0.78	0.13	4.27	3.33	0.20	0.05	0.05	1,471.96	0.12	0.04	1,486.01
Total		20.45	219.15	189.93	8.77	4.38	4.25	0.73	23.38	18.26	1.10	0.27	0.27	8,065.39	0.63	0.21	8,142.35
Northern Route - via Altamont	***Miles RT***																
Placer	1.8	0.05	0.54	0.47	0.02	0.01	0.01	0.00	0.06	0.04	0.00	0.00	0.00	19.76	0.00	0.00	19.95
Sacramento Metro	75.8	2.11	22.61	19.59	0.90	0.45	0.44	0.08	2.41	1.88	0.11	0.03	0.03	832.06	0.07	0.02	840.00
San Joaquin Valley	100.3	2.79	29.92	25.93	1.20	0.60	0.58	0.10	3.19	2.49	0.15	0.04	0.04	1,101.28	0.09	0.03	1,111.79
Bay Area	179.6	5.00	53.58	46.43	2.14	1.07	1.04	0.18	5.71	4.46	0.27	0.07	0.06	1,971.77	0.15	0.05	1,990.58
Monterrey Bay	226.8	6.32	67.67	58.64	2.71	1.35	1.31	0.23	7.22	5.64	0.34	0.08	0.08	2,490.24	0.20	0.06	2,514.00
San Luis Obispo	134.1	3.73	40.00	34.66	1.60	0.80	0.78	0.13	4.27	3.33	0.20	0.05	0.05	1,471.96	0.12	0.04	1,486.01
Total		20.00	214.31	185.73	8.57	4.29	4.16	0.71	22.86	17.86	1.07	0.27	0.26	7,887.07	0.62	0.20	7,962.34
Southern Route	***Miles RT***																
San Luis Obispo	9.5	0.27	2.85	2.47	0.11	0.06	0.06	0.01	0.30	0.24	0.01	0.00	0.00	104.75	0.01	0.00	105.75
Santa Barbara	216.4	6.03	64.56	55.95	2.58	1.29	1.25	0.22	6.89	5.38	0.32	0.08	0.08	2,376.05	0.19	0.06	2,398.72
Ventura	115.6	3.22	34.48	29.88	1.38	0.69	0.67	0.11	3.68	2.87	0.17	0.04	0.04	1,268.84	0.10	0.03	1,280.94
South Coast	176.2	4.91	52.56	45.55	2.10	1.05	1.02	0.18	5.61	4.38	0.26	0.07	0.06	1,934.44	0.15	0.05	1,952.90
Total		14.42	154.45	133.86	6.18	3.09	3.00	0.51	16.47	12.87	0.77	0.19	0.19	5,684.07	0.45	0.14	5,738.31
Within California																	
Mainline Rail		37.66	403.54	349.73	16.14	8.07	7.83	1.35	43.04	33.63	2.02	0.50	0.49	15,009.51	1.18	0.38	15,152.74
Project Total		40.27	425.71	381.56	17.72	8.84	8.58	1.59	45.82	37.18	2.22	0.58	0.56	15,822.57	1.24	0.40	15,973.56
Mainline Rail Outside SLO County		33.22	355.90	308.45	14.24	7.12	6.90	1.19	37.96	29.66	1.78	0.44	0.43	13,097.91	1.03	0.33	13,222.90

Locomotive Emissions Notes

Notes:

Mitigated peak day assumes use of Tier 2+ engines.
Duration used in the evaluation is the total time of train travel from the project site to the SLO boundary at the given speed.
Locomotives assumed to use the higher sulfur diesel as they come from out of state.
Mitigated peak day is assumed to be all 3 locomotive are Tier 2+.
Mitigated annual emissions assume Tier 2+ engines and EPA 2009 factors.
Emission factors for peak day are EPA Tier 2+ engines (EPA 2009)(adjusted to higher sulfur diesel).
Idling emission factors and fuel use based on CARB Preliminary Draft Locomotive Inventory Memo and the BAH 1992 report for a 16-710G3 engine.
PM2.5/PM10 ratio based on 0.97 from EPA study, 2009.
SO2 factor based on combined ULSD and out-of-state diesel (350ppm) as per Port of LA Calculations, 2011.
Emission factors for GHG based on kg/gallon. Conversion based on EPA 2009 (20.8 for line haul, 15.2 switching - bhp-hr/gal and 10.2065 CO2 kg/gallon).
The 10.2065 CO2 kg/gallon conversion is derived from the CARB mandatory reporting rule for diesel #2.
GHG Emissions tabulated in metric tonnes.
Locomotive load factor based on POLA 2011, and POS 2011.
Locomotive speed based on POLB 2008 of 40 mph.
Estimated switching locomotive fuel use of --> 1585 gallons per week, using EPA 2009 factor of 15.2 bhp-hr/gallon.
Rail distance based on UP rail line maps and data provided by UPRR.
Total round trip distance within CA for the UP northern route (through Reno) is longer than the Southern Route (through Yuma) by about only 2 miles.
Switching time based on information provided in Project Description.
Line Haul SM/SLO are the additional engines required between Santa Margarita and SLO for the Cuesta Grade.
SM to SLO Grade would add 2 engines, operating under dynamic braking (2.1% load) coming downhill (11.7miles), standard 28% load uphill (3.3 miles) and a standard 28% load returning (15 miles) for an average of 18% load.
Switching load factor based on EPA 1998 for switching, with idling portion removed.
Some switching emissions occur offsite along the mainline track siding.

Sources:

Booz-Allen Hamilton, 1992 Report on Locomotive Emission Inventory: Locomotive Emissions by County. August 1992.
EPA 2009, United States Environmental Protection Agency. Emission Factors for Locomotives. Office of Transportation and Air Quality. EPA-420-F-09-025.April 2009.
EPA 1998, Locomotive Emission Standards-Regulatory Support Doucment, EPA, April 1998 (EPA-420-R-98-101)
CARB, Carl Moyer Program Guidelines 2011 for Locomotives
POS 20011, Carbon Footprint Study for the Asia to North America Intermodal Trade, Port of Seattle (POS), June, 2011
POLA 2011, Port of Los Angeles Inventory of Air Emissions 2010, Port of Los Angeles, July 2011
POLB 2008, Port of Long Beach
CARB Preliminary Draft, Locomotive Emission Inventory, http://www.arb.ca.gov/msei/offroad/techmemo/locomotive_memo_2.pdf

Air Quality Miscelaneous Calculations

Crude Movements

5	Units/week average
80	Cars/Unit
714	BBLs/Car
57,143	Crude per unit, bbls
50	weeks/year
14,285,714	Crude throughput, bbls/year
39,139	Avg bbls/day

Crude Throughput

Year	Throughput	Average (bpd)
2003	13,813,748	37,851
2004	14,352,098	39,326
2005	15,489,149	42,442
2006	14,290,448	39,157
2007	15,810,183	43,321
2008	15,249,521	41,665
2009	13,080,967	35,838
2010	13,724,829	37,785
2011	14,126,030	38,701
2012	13,724,829	37,602
3 yr avg		38,029
Permit limit		48,950
Excess		10,921
Trains per year		69.8

Cancer Risk Calculation

	Res	Worker
Breathing rate	393	149
Inhale absorb rate	1	1
Exposure frequency	350	245
Exposure duration	70	30
AT	25550	25550
SF	1.1	1.1
cancer risk x ug/m3	414.5	47.1

per million
BR: 393 for the 95th percentile for residential
BR: 302 for the 80th percentile

Santa Margarita to SLO Load Calculation

2.1	Dynamic braking load
11.7	Dynamic braking distance
28.0	Uphill load
3.3	Uphill distance
7.8	Average load with full load
28	Average load returning (empty)
18	Average load both ways

Diesel CO2 Density CARB MMR Table 1

0.138	kg/mmbtu
73.96	mmbtu/gal
10.20648	kg CO2/gallon

CARB Fleet Mix Emission Factors for UP

from CARB website: http://www.arb.ca.gov/msprog/offroad/loco/loco.htm

Year 2009 data			Line Haul, g/bhp-hr				Switching, g/bhp-hr			
Engine Type	Number	Fraction	PM	NOx	HC	CO	PM	Nox	HC	CO
pre-Tier 0	1,986	0.24	0.32	13	0.48	1.28	0.44	17.4	1.01	1.83
Tier 0 and 0+	3,787	0.46	0.26	7.9	0.39	1.28	0.335	11.6	0.79	1.83
Tier 1 and 1+	1,184	0.14	0.26	6.7	0.38	1.28	0.335	9.9	0.79	1.83
Tier 2	1,319	0.16	0.18	4.95	0.26	1.28	0.19	7.3	0.51	1.83
Total/Weighted Avg	8,276		0.26	8.48	0.39	1.28	0.34	12.06	0.80	1.83

Notes
UP data only provided for Tier and Tier+ combined. Assumed equally split between the two emission factors

Odor Analysis

SCREEN3 Results: Fugitive emissions, area source

2810	source area, m2, 550 feet by 55 feet
3.96	emission rate, lbs/day, ROC
9600	H2S, ppmw
0.00001	ROC, emission rate, g/s-m2
7.1E-08	H2S, emission rate, g/s-m2
1420	H2S, ug/ppm
1.65	3 min/60min avg time ratio, as per
1.52	H2S, Result, ug/m3, 1 hr avg time
0.00107	H2S, ppm result
1.07	H2S, ppb result
2.50965	H2S, Result, ug/m3, 3min avg time
0.00177	H2S, ppm result
1.77	H2S, ppb result

SCREEN3 Results: Canister emissions, pt source

2.24	emission rate, lbs/day, ROC
4.8	H2S, ppmv
29	H2S MW
50	Gas approx MW
1.2E-02	ROC, emission rate, g/s
3.3E-08	H2S, emission rate, g/s
1420	H2S, ug/ppm
1.65	3 min/60min avg time ratio, as per
2.60E-04	H2S, Result, ug/m3, 1 hr avg time
0.00000	H2S, ppm result
0.0002	H2S, ppb result
0.000429	H2S, Result, ug/m3, 3min avg time
0.00000	H2S, ppm result
0.0003	H2S, ppb result

Phillips 66 Rail Spur Project
Construction Truck Traffic

Stage	Activity	Units	Total Trips	Number of Days	Average Trips per Day	Peak Day Trips, RT	Peak Day Trips, OW
Demolition	Debris Removal	1000 yds3	100	11	9.1	10	20
	Construction Equipment Delivery	6 equipment pieces	12	4	3.0	6	12
	Misc		50	88	0.6	2	4
	Total		***162***		***12.7***	***18***	***36***
Turnout Track	Construction Equipment Delivery	7 equipment pieces	14	4	3.5	7	14
	Misc		50	88	0.6	2	4
	Total		***64***		***4.1***	***9***	***18***
Grading	Access Rd granite	Length 3,000 feet at 3" deep, 12' wide	33	44	0.8	5	10
	Construction Equipment Delivery	16 equipment pieces	32	4	8.0	16	32
	Utility/Foremans trucks		240	44	5.5	10	20
	Misc	misc	27	88	0.3	2	4
	Total		***332***		***14.5***	***33***	***66***
Unloading Facility and Pipeline Construction	Asphalt	1.7 acres at 3"	93	44	2.1	4	8
	CMB	4.6 acres at 3"	186	44	4.2	5	10
	Insulation		14	44	0.3	2	4
	Paint/Steel/Concrete		345	44	7.8	16	32
	Process equipment		64	44	1.5	3	6
	Restroom and septic system	estimated	10	44	0.2	2	4
	Electrical Equipment		21	44	0.5	2	4
	Fence		7	44	0.2	2	4
	Pipeline pipe		16	44	0.4	2	4
	Construction Equipment Delivery	17 equipment pieces	34	4	8.5	10	20
	Misc	Misc	66	88	0.8	2	4
	Total		***855***		***26.4***	***50***	***100***
Rail Construction	Tracks	assume 139 pound rail, total rail length of 31,260x2	72	88	0.8	2	4
	RR Ties		60	11	5.5	10	20
	Ballast and sub-ballast		1400	22	63.6	75	150
	Turnouts		7	11	0.6	2	4
	Construction Equipment Delivery	10 equipment pieces	20	4	5.0	10	20
	Misc	Misc	147	22	6.7	10	20
	Total		***1706***		***82.2***	***109***	***218***
Commissioning	Misc	Misc	88	44	2.0	4	8

Source: Adapted by MRS from Phillips 66 Application to County and Comments by Phillips 66 on Project Description.

CalEEMod Summary: Construction Emissions
Taken from CalEEMod version 2013.2.2

PEAK DAY SUMMARY

	Emissions, Peak Day, Lbs/Day									
Year	**ROG**	**NOX**	**CO**	**Sox**	**PM10 Dust**	**PM10 Exh**	**PM All**	**PM25 Dust**	**PM25 Exh**	**PM25 All**
2014	19.0	221.7	136.2	0.2	18.8	8.5	27.3	9.2	7.8	17.0
2015	39.0	155.0	98.7	0.2	6.4	6.5	12.9	2.5	6.0	8.6
Mitigated										
2014	12.4	140.9	106.0	0.2	9.3	4.6	13.8	4.1	4.2	8.3
2015	39.0	127.3	93.0	0.2	4.5	4.9	9.4	1.5	4.5	6.1

Note: CalEEMod2013 calculates peak day mitigated Pmdust incorrectly . Corrected manually herein
Peak period based on 2014. 2015 Peak day includes commissioning, which would not occur at the same time as other activities

Peak Day Mitigated	ROC+Nox	153.3	
Peak Day Mitigated	DPM	4.9	
Peak Day Mitigated	ROC+Nox	77.01	with staggered construction

Peak Day Detailed Breakdown

Unmitigated	Emissions, Peak Day, Lbs/Day									
Activity	**ROG**	**NOX**	**CO**	**Sox**	**PM10 Dust**	**PM10 Exh**	**PM All**	**PM25 Dust**	**PM25 Exh**	**PM25 All**
Demolition										
onsite	9.04	101.47	70.87	0.07	1.00	4.97	5.98	0.15	4.58	4.73
offsite	0.53	4.70	5.96	0.01	0.48	0.08	0.56	0.13	0.07	0.20
Soil Transport										
onsite	4.80	56.25	31.47	0.05	6.02	2.32	8.35	3.31	2.14	5.45
offsite	0.13	0.19	1.77	0.00	0.20	0.00	0.20	0.05	0.00	0.05
Grading										
onsite	6.94	81.69	46.85	0.07	6.59	3.55	10.13	3.37	3.26	6.63
offsite	0.32	1.91	3.87	0.01	0.36	0.03	0.39	0.10	0.03	0.13
Site Prep - Rail 2014										
onsite	4.11	48.14	25.17	0.05	3.01	2.00	5.01	1.66	1.84	3.49
offsite	2.65	33.52	27.05	0.06	2.60	0.59	3.19	0.68	0.55	1.23
Site Prep - Rail 2015										
onsite	4.04	46.79	24.80	0.05	3.01	1.94	4.95	1.66	1.78	3.44
offsite	2.44	29.05	25.52	0.06	2.60	0.44	3.04	0.68	0.40	1.08
Site Prep-pipeline 2015										
onsite	2.28	26.54	12.10	0.03	0.00	1.08	1.08	0.00	1.00	1.00
offsite	0.32	2.59	3.72	0.01	0.34	0.04	0.38	0.09	0.04	0.13
Constr-Unloading Area										
onsite	4.10	38.12	22.56	0.03		2.29	2.29		2.13	2.13
offsite	0.37	2.66	4.32	0.01	0.42	0.04	0.46	0.11	0.04	0.15
Constr-paving										
onsite	1.42	9.26	5.67	0.01		0.71	0.71		0.65	0.65
offsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commissioning										
onsite	39.00									
offsite										

CalEEMod Summary: Construction Emissions Mitigated

Mitigated	**Emissions, Peak Day, Lbs/Day**									
Activity	**ROG**	**NOX**	**CO**	**Sox**	**PM10 Dust**	**PM10 Exh**	**PM All**	**PM25 Dust**	**PM25 Exh**	**PM25 All**
Demolition										
onsite	2.17	20.82	35.54	0.07	0.39	0.70	1.09	0.06	0.65	0.71
offsite	0.53	4.70	5.96	0.01	0.48	0.08	0.56	0.13	0.07	0.20
Soil Transport										
onsite	3.17	36.55	21.45	0.05	2.35	1.38	3.73	1.29	1.27	2.56
offsite	0.13	0.19	1.77	0.00	0.20	0.00	0.20	0.05	0.00	0.05
Grading										
onsite	2.95	31.79	31.72	0.07	2.57	1.15	3.72	1.31	1.06	2.38
offsite	0.32	1.91	3.87	0.01	0.36	0.03	0.39	0.10	0.03	0.13
Site Prep - Rail 2014										
onsite	3.16	36.99	20.14	0.05	1.17	1.42	2.59	0.65	1.30	1.95
offsite	2.65	33.52	27.05	0.06	2.60	0.59	3.19	0.68	0.55	1.23
Site Prep - Rail 2015										
onsite	3.09	35.75	19.84	0.05	1.17	1.37	2.54	0.65	1.26	1.90
offsite	2.44	29.05	25.52	0.06	2.60	0.44	3.04	0.68	0.40	1.08
Site Prep-pipeline 2015										
onsite	2.00	23.32	11.94	0.03	0.00	0.89	0.89	0.00	0.82	0.82
offsite	0.32	2.59	3.72	0.01	0.34	0.04	0.38	0.09	0.04	0.13
Constr-Unloading Area										
onsite	2.91	24.63	21.97	0.03		1.42	1.42		1.34	1.34
offsite	0.37	2.66	4.32	0.01	0.42	0.04	0.46	0.11	0.04	0.15
Constr-paving										
onsite	1.42	9.26	5.67	0.01		0.71	0.71		0.65	0.65
offsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commissioning										
onsite	39.00									
offsite										

CalEEMod Construction Emissions: ANNUAL TOTAL SUMMARY

	Emissions, Total, tons													
Year	ROG	NOX	CO	Sox	PM10 Dust	PM10 Exh	PM All	PM25 Dust	PM25 Exh	PM25 All	CO2	CH4	N2O	MTCO2e
2014	0.68	7.78	4.80	0.01	0.64	0.33	0.97	0.33	0.30	0.63	671	0.18	0.00	675
2015	1.13	2.78	1.69	0.01	0.07	0.13	0.20	0.03	0.12	0.15	289	0.06	0.00	291
Mitigated														
2014	0.35	3.77	3.28	0.01	0.28	0.13	0.41	0.13	0.12	0.26	671	0.18	0.00	675
2015	1.08	2.17	1.64	0.003	0.05	0.09	0.14	0.02	0.09	0.10	289	0.06	0.00	291

TOTAL DETAILS

unmitigated	Emissions, Total, tons									
Activity	**ROG**	**NOX**	**CO**	**Sox**	**PM10 Dust**	**PM10 Exh**	**PM All**	**PM25 Dust**	**PM25 Exh**	**PM25 All**
Demolition										
Offroad	0.0995	1.1162	0.7796	0.01	0.01	0.0547	0.0547	0.01	0.0503	0.0503
Offsite	0.0055	0.052	0.0615	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fugitive Dust Mit										
Soil Transport										
Fugitive Dust					0.265			0.1457		
Offroad	0.2112	2.4749	1.3845	0.01		0.1023	0.1023		0.0941	0.0941
Offsite	0.0055	0.01	0.0759	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fugitive Dust Mit					0.1			0.06		
Grading										
Fugitive Dust					0.29			0.15		
Offroad	0.3053	3.5945	2.0616	0.01		0.156	0.156		0.1435	0.1435
Offsite	0.0134	0.0843	0.1624	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fugitive Dust Mit					0.11			0.06		
Rail Construction-2014										
Fugitive Dust					0.033			0.018		
Offroad	0.0226	0.2647	0.1385	0.01		0.01	0.01		0.01	0.01
Offsite	0.0138	0.1859	0.1355	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fugitive Dust Mit					0.0129			0.01		
Rail Construction-2015										
Fugitive Dust					0.033			0.018		
Offroad	0.0222	0.2573	0.1364	0.01		0.01	0.01		0.01	0.01
Offsite	0.0138	0.1611	0.1273	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fugitive Dust Mit					0.01			0.01		
Pipeline Construction										
Fugitive Dust										
Offroad	0.0754	0.8758	0.3992	0.01		0.0357	0.0357		0.0329	0.0329
Offsite	0.01	0.0861	0.115	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fugitive Dust Mit										
Unloading Construction										
Fugitive Dust										
Offroad	0.1354	1.2579	0.7446	0.01		0.0755	0.0755		0.0704	0.0704
Offsite	0.0114	0.0883	0.1346	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fugitive Dust Mit										
Paving Construction										
Asphalt	0.01									
Offroad	0.01	0.05	0.03	0.01		0.01	0.01		0.01	0.01
Offsite										
Fugitive Dust Mit										
Commissioning										
Painting	0.8581									
Offroad										
Offsite	0.01	0.018	0.0252	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fugitive Dust Mit										

CalEEMod Construction Emissions
MITIGATED Worst Case Scenario

	Emissions, Total, tons									
Activity	**ROG**	**NOX**	**CO**	**Sox**	**PM10 Dust**	**PM10 Exh**	**PM All**	**PM25 Dust**	**PM25 Exh**	**PM25 All**
Soil Transport										
Fugitive Dust					0.1033		0.1033	0.0568		0.0568
Offroad	0.1393	1.6083	0.9439	0.002		0.061	0.061		0.056	0.056
Offsite	0.0055	0.01	0.0759	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fugitive Dust Mit					0.1033			0.0568		
Grading										
Fugitive Dust					0.1131		0.1131	0.0579		0.0579
Offroad	0.1296	1.3989	1.3955	0.01		0.0508	0.0508		0.0468	0.0468
Offsite	0.0134	0.0843	0.1624	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fugitive Dust Mit					0.1131			0.0579		
Rail Construction-2014										
Fugitive Dust					0.0129		0.0129	0.0071		0.0071
Offroad	0.0174	0.2034	0.1108	0.01		0.0078	0.0078		0.0072	0.0072
Offsite	0.0138	0.1859	0.1355	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Fugitive Dust Mit					0.0129			0.01		

Quarter Scenarios

	Peak Quarter Emissions, Total, tons									
Scenario	**ROG**	**NOX**	**CO**	**Sox**	**PM10 Dust**	**PM10 Exh**	**PM All**	**PM25 Dust**	**PM25 Exh**	**PM25 All**
Grading, Soil Transportation and Rail	0.44	5.07	3.04	0.05	0.47	0.23		0.26	0.21	
Rail, Pipeline, Unloading and paving	0.23	2.20	1.34	0.06	0.07	0.13		0.05	0.12	

Grading, Soil Transportation and Rail										
Onsite: Fugitive Dust					0.45			0.24		
Onsite: Vehicles	0.41	4.82	2.72	0.03		0.20			0.19	
Offsite: Fugitive Dust					0.03			0.03		
Offsite: Vehicles	0.03	0.26	0.31	0.03		0.03			0.03	
Total	0.44	5.07	3.04	0.05	0.47	0.23		0.26	0.21	

Grading, Soil Transportation and Rail: MITIGATED										
Onsite: Fugitive Dust					0.17			0.10		
Onsite: Vehicles	0.22	2.46	1.87	0.02		0.09			0.08	
Offsite: Fugitive Dust					0.03			0.03		
Offsite: Vehicles	0.03	0.26	0.31	0.03		0.03			0.03	
Total	0.25	2.72	2.18	0.04	0.20	0.12		0.13	0.11	
Percent Reduction	44%	46%	28%	12%	59%	49%		53%	49%	

Note: Quarterly emissions based on total emissions for grading/soil transportation multiplied by 0.75 plus 2014 rail total emissions

Peak Qrtr Activity	Months	Notes
Soil Transport	3	soil transport phase durations of 4 months
Grading	3	grading phase durations of 4 months
Rail Construction	1	rail construction duration of 1 month

Peak Qrtr Mitigated	ROC+Nox	2.96	
Peak Qrtr Mitigated	ROC+Nox	2.03	with schedule staggering, grading and soil transport only over 5 months
Peak Qrtr Mitigated	DPM	0.12	
Peak Qrtr Mitigated	Fug Dust	0.20	

Phillips 66 Santa Maria

San Luis Obispo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	47.00	0.00	0
Other Asphalt Surfaces	1.70	Acre	1.70	74,052.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - edit

Construction Phase - assumptions

Off-road Equipment -

Off-road Equipment - Applicant data and data pn paving requirements

Off-road Equipment - applicant data

Off-road Equipment - Applicant info

Off-road Equipment - site assumptions

Off-road Equipment - assumptions

Off-road Equipment - assumption

Off-road Equipment - site assumptions

Off-road Equipment - assumption

Trips and VMT - demolition material to be sent offsite
Soil transport onsite handled by on-site equipment levels and use

Demolition -

Grading - total site disturbance

Road Dust - test

Water And Wastewater - onsite septic only

Construction Off-road Equipment Mitigation - Standard and BACT

Operational Off-Road Equipment - truck use along rail spur dirt road

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	111078	0
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	55.00	44.00
tblConstructionPhase	NumDays	740.00	66.00
tblConstructionPhase	NumDays	50.00	22.00
tblConstructionPhase	NumDays	75.00	88.00
tblConstructionPhase	NumDays	55.00	11.00
tblConstructionPhase	NumDays	30.00	88.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	30.00	66.00
tblConstructionPhase	PhaseEndDate	3/18/2015	7/1/2015
tblConstructionPhase	PhaseEndDate	7/3/2015	4/2/2015
tblConstructionPhase	PhaseEndDate	8/29/2014	8/30/2014
tblConstructionPhase	PhaseEndDate	5/4/2015	12/31/2014
tblConstructionPhase	PhaseEndDate	4/17/2015	1/15/2015
tblConstructionPhase	PhaseEndDate	1/30/2015	1/15/2015
tblConstructionPhase	PhaseEndDate	4/17/2015	4/2/2015
tblConstructionPhase	PhaseStartDate	1/16/2015	5/1/2015

tblConstructionPhase	PhaseStartDate	4/3/2015	1/1/2015
tblConstructionPhase	PhaseStartDate	1/1/2015	9/1/2014
tblConstructionPhase	PhaseStartDate	4/3/2015	1/1/2015
tblConstructionPhase	PhaseStartDate	8/31/2014	9/1/2014
tblConstructionPhase	PhaseStartDate	1/1/2015	12/17/2014
tblConstructionPhase	PhaseStartDate	1/16/2015	1/1/2015
tblGrading	AcresOfGrading	132.00	47.00
tblLandUse	LotAcreage	0.00	47.00
tblOffRoadEquipment	HorsePower	226.00	208.00
tblOffRoadEquipment	HorsePower	162.00	157.00
tblOffRoadEquipment	HorsePower	89.00	149.00
tblOffRoadEquipment	HorsePower	174.00	162.00
tblOffRoadEquipment	HorsePower	125.00	89.00
tblOffRoadEquipment	HorsePower	255.00	358.00
tblOffRoadEquipment	HorsePower	255.00	358.00
tblOffRoadEquipment	HorsePower	255.00	358.00
tblOffRoadEquipment	HorsePower	255.00	358.00
tblOffRoadEquipment	HorsePower	255.00	358.00
tblOffRoadEquipment	HorsePower	361.00	356.00
tblOffRoadEquipment	HorsePower	97.00	75.00
tblOffRoadEquipment	HorsePower	97.00	75.00
tblOffRoadEquipment	HorsePower	97.00	75.00
tblOffRoadEquipment	HorsePower	205.00	82.00
tblOffRoadEquipment	HorsePower	226.00	208.00
tblOffRoadEquipment	HorsePower	400.00	381.00
tblOffRoadEquipment	HorsePower	400.00	381.00
tblOffRoadEquipment	HorsePower	400.00	381.00
tblOffRoadEquipment	HorsePower	400.00	381.00

tblOffRoadEquipment	HorsePower	400.00	381.00
tblOffRoadEquipment	HorsePower	97.00	75.00
tblOffRoadEquipment	HorsePower	97.00	75.00
tblOffRoadEquipment	LoadFactor	0.20	0.40
tblOffRoadEquipment	LoadFactor	0.74	0.42
tblOffRoadEquipment	LoadFactor	0.45	0.42
tblOffRoadEquipment	LoadFactor	0.48	0.42
tblOffRoadEquipment	LoadFactor	0.50	0.42
tblOffRoadEquipment	LoadFactor	0.43	0.42
tblOffRoadEquipment	LoadFactor	0.43	0.42
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00

tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	0.00
tblOperationalOffRoadEquipment	OperHorsePower	400.00	381.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripNumber	99.00	226.00
tblTripsAndVMT	HaulingTripNumber	0.00	332.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,706.00
tblTripsAndVMT	HaulingTripNumber	0.00	426.00
tblTripsAndVMT	HaulingTripNumber	0.00	426.00
tblTripsAndVMT	VendorTripNumber	12.00	0.00
tblTripsAndVMT	WorkerTripNumber	25.00	23.00
tblTripsAndVMT	WorkerTripNumber	18.00	23.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblVehicleEF	HHD	0.02	0.07
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	0.00	0.13
tblVehicleEF	HHD	2.71	8.13
tblVehicleEF	HHD	1.34	3.98
tblVehicleEF	HHD	89.49	34.56
tblVehicleEF	HHD	565.98	575.19
tblVehicleEF	HHD	1,681.93	1,721.44
tblVehicleEF	HHD	65.88	68.22
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	5.29	18.73
tblVehicleEF	HHD	6.79	8.39
tblVehicleEF	HHD	5.80	3.93

tblVehicleEF	HHD	0.02	0.18
tblVehicleEF	HHD	0.06	0.02
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.09	0.29
tblVehicleEF	HHD	6.6660e-003	2.5000e-003
tblVehicleEF	HHD	0.02	0.18
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	8.6600e-003	0.03
tblVehicleEF	HHD	0.08	0.29
tblVehicleEF	HHD	5.4820e-003	2.5000e-003
tblVehicleEF	HHD	3.7330e-003	1.2000e-003
tblVehicleEF	HHD	0.28	0.03
tblVehicleEF	HHD	0.50	1.68
tblVehicleEF	HHD	2.2720e-003	6.0000e-004
tblVehicleEF	HHD	0.25	0.70
tblVehicleEF	HHD	1.33	0.03
tblVehicleEF	HHD	4.59	2.29
tblVehicleEF	HHD	5.5960e-003	0.01
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	2.2310e-003	8.0000e-004
tblVehicleEF	HHD	3.7330e-003	1.2000e-003
tblVehicleEF	HHD	0.28	0.03
tblVehicleEF	HHD	0.57	1.92
tblVehicleEF	HHD	2.2720e-003	6.0000e-004
tblVehicleEF	HHD	0.28	0.79
tblVehicleEF	HHD	1.33	0.03
tblVehicleEF	HHD	4.91	2.45
tblVehicleEF	HHD	0.02	0.07

tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	0.00	0.10
tblVehicleEF	HHD	1.97	5.33
tblVehicleEF	HHD	1.34	4.01
tblVehicleEF	HHD	68.01	25.49
tblVehicleEF	HHD	599.61	609.36
tblVehicleEF	HHD	1,681.93	1,721.44
tblVehicleEF	HHD	65.88	68.22
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	5.46	19.67
tblVehicleEF	HHD	6.57	8.51
tblVehicleEF	HHD	5.47	3.70
tblVehicleEF	HHD	0.02	0.14
tblVehicleEF	HHD	0.06	0.02
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.09	0.29
tblVehicleEF	HHD	6.6660e-003	2.5000e-003
tblVehicleEF	HHD	0.01	0.14
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	8.6600e-003	0.03
tblVehicleEF	HHD	0.08	0.29
tblVehicleEF	HHD	5.4820e-003	2.5000e-003
tblVehicleEF	HHD	7.1400e-003	2.5000e-003
tblVehicleEF	HHD	0.28	0.03
tblVehicleEF	HHD	0.47	1.54
tblVehicleEF	HHD	4.2630e-003	1.3000e-003
tblVehicleEF	HHD	0.25	0.70
tblVehicleEF	HHD	1.28	0.03

tblVehicleEF	HHD	3.63	1.86
tblVehicleEF	HHD	5.9280e-003	0.01
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	1.8640e-003	6.0000e-004
tblVehicleEF	HHD	7.1400e-003	2.5000e-003
tblVehicleEF	HHD	0.28	0.03
tblVehicleEF	HHD	0.53	1.76
tblVehicleEF	HHD	4.2630e-003	1.3000e-003
tblVehicleEF	HHD	0.28	0.79
tblVehicleEF	HHD	1.28	0.03
tblVehicleEF	HHD	3.88	1.99
tblVehicleEF	HHD	0.02	0.08
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	0.00	0.13
tblVehicleEF	HHD	3.74	10.13
tblVehicleEF	HHD	1.33	3.97
tblVehicleEF	HHD	102.00	35.05
tblVehicleEF	HHD	519.55	528.00
tblVehicleEF	HHD	1,681.93	1,721.44
tblVehicleEF	HHD	65.88	68.22
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	5.05	18.06
tblVehicleEF	HHD	6.73	8.71
tblVehicleEF	HHD	5.98	3.95
tblVehicleEF	HHD	0.02	0.21
tblVehicleEF	HHD	0.06	0.02
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.09	0.29

tblVehicleEF	HHD	6.6660e-003	2.5000e-003
tblVehicleEF	HHD	0.02	0.21
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	8.6600e-003	0.03
tblVehicleEF	HHD	0.08	0.29
tblVehicleEF	HHD	5.4820e-003	2.5000e-003
tblVehicleEF	HHD	2.6080e-003	1.3000e-003
tblVehicleEF	HHD	0.35	0.04
tblVehicleEF	HHD	0.54	1.78
tblVehicleEF	HHD	1.7350e-003	8.0000e-004
tblVehicleEF	HHD	0.25	0.70
tblVehicleEF	HHD	1.44	0.03
tblVehicleEF	HHD	5.14	2.32
tblVehicleEF	HHD	5.1360e-003	9.5000e-003
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	2.4450e-003	8.0000e-004
tblVehicleEF	HHD	2.6080e-003	1.3000e-003
tblVehicleEF	HHD	0.35	0.04
tblVehicleEF	HHD	0.61	2.03
tblVehicleEF	HHD	1.7350e-003	8.0000e-004
tblVehicleEF	HHD	0.28	0.79
tblVehicleEF	HHD	1.44	0.03
tblVehicleEF	HHD	5.51	2.48
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	1.26	1.83
tblVehicleEF	LDA	2.84	4.79
tblVehicleEF	LDA	264.46	286.67

tblVehicleEF	LDA	61.62	66.44
tblVehicleEF	LDA	0.46	0.44
tblVehicleEF	LDA	0.14	0.19
tblVehicleEF	LDA	0.19	0.31
tblVehicleEF	LDA	0.04	0.01
tblVehicleEF	LDA	1.9850e-003	9.4000e-003
tblVehicleEF	LDA	3.2170e-003	6.4000e-003
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	2.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.8090e-003	9.4000e-003
tblVehicleEF	LDA	2.9410e-003	6.4000e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.14	0.17
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.34	0.08
tblVehicleEF	LDA	0.23	0.40
tblVehicleEF	LDA	3.2540e-003	3.3000e-003
tblVehicleEF	LDA	7.8400e-004	8.0000e-004
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.14	0.17
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.06	0.08
tblVehicleEF	LDA	0.34	0.08
tblVehicleEF	LDA	0.24	0.42
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	1.33	2.00

tblVehicleEF	LDA	2.17	3.48
tblVehicleEF	LDA	275.59	298.70
tblVehicleEF	LDA	61.62	66.44
tblVehicleEF	LDA	0.46	0.44
tblVehicleEF	LDA	0.12	0.18
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDA	0.04	0.01
tblVehicleEF	LDA	1.9850e-003	9.4000e-003
tblVehicleEF	LDA	3.2170e-003	6.4000e-003
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	2.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.8090e-003	9.4000e-003
tblVehicleEF	LDA	2.9410e-003	6.4000e-003
tblVehicleEF	LDA	0.08	0.15
tblVehicleEF	LDA	0.15	0.19
tblVehicleEF	LDA	0.06	0.11
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.32	0.08
tblVehicleEF	LDA	0.18	0.31
tblVehicleEF	LDA	3.3930e-003	3.5000e-003
tblVehicleEF	LDA	7.7200e-004	8.0000e-004
tblVehicleEF	LDA	0.08	0.15
tblVehicleEF	LDA	0.15	0.19
tblVehicleEF	LDA	0.06	0.11
tblVehicleEF	LDA	0.06	0.08
tblVehicleEF	LDA	0.32	0.08
tblVehicleEF	LDA	0.20	0.33
tblVehicleEF	LDA	0.01	0.01

tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	1.26	1.79
tblVehicleEF	LDA	3.17	4.91
tblVehicleEF	LDA	262.24	284.27
tblVehicleEF	LDA	61.62	66.44
tblVehicleEF	LDA	0.46	0.44
tblVehicleEF	LDA	0.14	0.20
tblVehicleEF	LDA	0.20	0.32
tblVehicleEF	LDA	0.04	0.01
tblVehicleEF	LDA	1.9850e-003	9.4000e-003
tblVehicleEF	LDA	3.2170e-003	6.4000e-003
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	2.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.8090e-003	9.4000e-003
tblVehicleEF	LDA	2.9410e-003	6.4000e-003
tblVehicleEF	LDA	0.04	0.07
tblVehicleEF	LDA	0.16	0.21
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.39	0.09
tblVehicleEF	LDA	0.25	0.40
tblVehicleEF	LDA	3.2270e-003	3.2000e-003
tblVehicleEF	LDA	7.8900e-004	8.0000e-004
tblVehicleEF	LDA	0.04	0.07
tblVehicleEF	LDA	0.16	0.21
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.06	0.07
tblVehicleEF	LDA	0.39	0.09

tblVehicleEF	LDA	0.26	0.43
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	3.16	4.12
tblVehicleEF	LDT1	5.43	8.27
tblVehicleEF	LDT1	320.87	343.62
tblVehicleEF	LDT1	74.98	80.88
tblVehicleEF	LDT1	0.04	0.19
tblVehicleEF	LDT1	0.33	0.50
tblVehicleEF	LDT1	0.31	0.45
tblVehicleEF	LDT1	0.04	0.01
tblVehicleEF	LDT1	3.4520e-003	0.01
tblVehicleEF	LDT1	4.6840e-003	8.3000e-003
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	2.0000e-003	8.0000e-003
tblVehicleEF	LDT1	3.0790e-003	0.01
tblVehicleEF	LDT1	4.2060e-003	8.3000e-003
tblVehicleEF	LDT1	0.10	0.12
tblVehicleEF	LDT1	0.26	0.26
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.13	0.14
tblVehicleEF	LDT1	0.88	0.22
tblVehicleEF	LDT1	0.43	0.63
tblVehicleEF	LDT1	3.8050e-003	4.1000e-003
tblVehicleEF	LDT1	9.5700e-004	1.0000e-003
tblVehicleEF	LDT1	0.10	0.12
tblVehicleEF	LDT1	0.26	0.26
tblVehicleEF	LDT1	0.07	0.08

tblVehicleEF	LDT1	0.16	0.18
tblVehicleEF	LDT1	0.88	0.22
tblVehicleEF	LDT1	0.46	0.67
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.02
tblVehicleEF	LDT1	3.23	4.37
tblVehicleEF	LDT1	4.18	6.01
tblVehicleEF	LDT1	333.47	356.91
tblVehicleEF	LDT1	74.98	80.88
tblVehicleEF	LDT1	0.04	0.19
tblVehicleEF	LDT1	0.30	0.49
tblVehicleEF	LDT1	0.28	0.41
tblVehicleEF	LDT1	0.04	0.01
tblVehicleEF	LDT1	3.4520e-003	0.01
tblVehicleEF	LDT1	4.6840e-003	8.3000e-003
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	2.0000e-003	8.0000e-003
tblVehicleEF	LDT1	3.0790e-003	0.01
tblVehicleEF	LDT1	4.2060e-003	8.3000e-003
tblVehicleEF	LDT1	0.18	0.25
tblVehicleEF	LDT1	0.26	0.29
tblVehicleEF	LDT1	0.12	0.19
tblVehicleEF	LDT1	0.13	0.15
tblVehicleEF	LDT1	0.79	0.20
tblVehicleEF	LDT1	0.35	0.50
tblVehicleEF	LDT1	3.9550e-003	4.3000e-003
tblVehicleEF	LDT1	9.3500e-004	9.0000e-004
tblVehicleEF	LDT1	0.18	0.25

tblVehicleEF	LDT1	0.26	0.29
tblVehicleEF	LDT1	0.12	0.19
tblVehicleEF	LDT1	0.16	0.18
tblVehicleEF	LDT1	0.79	0.20
tblVehicleEF	LDT1	0.38	0.53
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	3.20	4.05
tblVehicleEF	LDT1	6.04	8.46
tblVehicleEF	LDT1	318.36	340.97
tblVehicleEF	LDT1	74.98	80.88
tblVehicleEF	LDT1	0.04	0.19
tblVehicleEF	LDT1	0.34	0.54
tblVehicleEF	LDT1	0.32	0.46
tblVehicleEF	LDT1	0.04	0.01
tblVehicleEF	LDT1	3.4520e-003	0.01
tblVehicleEF	LDT1	4.6840e-003	8.3000e-003
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	2.0000e-003	8.0000e-003
tblVehicleEF	LDT1	3.0790e-003	0.01
tblVehicleEF	LDT1	4.2060e-003	8.3000e-003
tblVehicleEF	LDT1	0.07	0.13
tblVehicleEF	LDT1	0.30	0.33
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	1.05	0.27
tblVehicleEF	LDT1	0.47	0.64
tblVehicleEF	LDT1	3.7760e-003	4.0000e-003

tblVehicleEF	LDT1	9.6800e-004	1.0000e-003
tblVehicleEF	LDT1	0.07	0.13
tblVehicleEF	LDT1	0.30	0.33
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.16	0.18
tblVehicleEF	LDT1	1.05	0.27
tblVehicleEF	LDT1	0.51	0.68
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.92	2.69
tblVehicleEF	LDT2	4.63	6.55
tblVehicleEF	LDT2	381.86	405.99
tblVehicleEF	LDT2	88.00	93.08
tblVehicleEF	LDT2	0.21	0.20
tblVehicleEF	LDT2	0.29	0.40
tblVehicleEF	LDT2	0.42	0.63
tblVehicleEF	LDT2	0.04	0.01
tblVehicleEF	LDT2	2.2050e-003	0.02
tblVehicleEF	LDT2	3.5240e-003	0.01
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	2.0000e-003	8.0000e-003
tblVehicleEF	LDT2	2.0260e-003	0.02
tblVehicleEF	LDT2	3.2470e-003	0.01
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	0.19	0.18
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.06	0.08
tblVehicleEF	LDT2	0.66	0.15

tblVehicleEF	LDT2	0.36	0.51
tblVehicleEF	LDT2	4.4480e-003	4.1000e-003
tblVehicleEF	LDT2	1.0860e-003	1.0000e-003
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	0.19	0.18
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.08	0.11
tblVehicleEF	LDT2	0.66	0.15
tblVehicleEF	LDT2	0.39	0.55
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.04	2.91
tblVehicleEF	LDT2	3.51	4.74
tblVehicleEF	LDT2	397.40	422.39
tblVehicleEF	LDT2	88.00	93.08
tblVehicleEF	LDT2	0.21	0.20
tblVehicleEF	LDT2	0.26	0.39
tblVehicleEF	LDT2	0.39	0.57
tblVehicleEF	LDT2	0.04	0.01
tblVehicleEF	LDT2	2.2050e-003	0.02
tblVehicleEF	LDT2	3.5240e-003	0.01
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	2.0000e-003	8.0000e-003
tblVehicleEF	LDT2	2.0260e-003	0.02
tblVehicleEF	LDT2	3.2470e-003	0.01
tblVehicleEF	LDT2	0.12	0.16
tblVehicleEF	LDT2	0.20	0.20
tblVehicleEF	LDT2	0.09	0.12

tblVehicleEF	LDT2	0.06	0.08
tblVehicleEF	LDT2	0.59	0.13
tblVehicleEF	LDT2	0.30	0.40
tblVehicleEF	LDT2	4.6300e-003	4.4000e-003
tblVehicleEF	LDT2	1.0660e-003	9.0000e-004
tblVehicleEF	LDT2	0.12	0.16
tblVehicleEF	LDT2	0.20	0.20
tblVehicleEF	LDT2	0.09	0.12
tblVehicleEF	LDT2	0.08	0.11
tblVehicleEF	LDT2	0.59	0.13
tblVehicleEF	LDT2	0.32	0.43
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.91	2.63
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tblVehicleEF	LDT2	378.77	402.73
tblVehicleEF	LDT2	88.00	93.08
tblVehicleEF	LDT2	0.21	0.20
tblVehicleEF	LDT2	0.30	0.43
tblVehicleEF	LDT2	0.44	0.63
tblVehicleEF	LDT2	0.04	0.01
tblVehicleEF	LDT2	2.2050e-003	0.02
tblVehicleEF	LDT2	3.5240e-003	0.01
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	2.0000e-003	8.0000e-003
tblVehicleEF	LDT2	2.0260e-003	0.02
tblVehicleEF	LDT2	3.2470e-003	0.01
tblVehicleEF	LDT2	0.05	0.08

tblVehicleEF	LDT2	0.21	0.22
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.06	0.08
tblVehicleEF	LDT2	0.80	0.18
tblVehicleEF	LDT2	0.40	0.52
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tblVehicleEF	LDT2	1.0950e-003	1.0000e-003
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.21	0.22
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.08	0.10
tblVehicleEF	LDT2	0.80	0.18
tblVehicleEF	LDT2	0.42	0.56
tblVehicleEF	LHD1	1.0610e-003	1.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.16	0.20
tblVehicleEF	LHD1	2.12	1.29
tblVehicleEF	LHD1	4.53	3.46
tblVehicleEF	LHD1	8.95	9.14
tblVehicleEF	LHD1	734.28	749.43
tblVehicleEF	LHD1	32.09	32.49
tblVehicleEF	LHD1	0.07	0.02
tblVehicleEF	LHD1	0.09	0.02
tblVehicleEF	LHD1	2.10	1.13
tblVehicleEF	LHD1	1.02	1.27
tblVehicleEF	LHD1	9.7000e-004	3.0000e-004
tblVehicleEF	LHD1	0.06	0.01

tblVehicleEF	LHD1	9.8670e-003	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.1260e-003	1.3000e-003
tblVehicleEF	LHD1	8.9300e-004	3.0000e-004
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	2.4670e-003	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0360e-003	1.3000e-003
tblVehicleEF	LHD1	1.9670e-003	8.0000e-004
tblVehicleEF	LHD1	0.07	0.02
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.0220e-003	3.0000e-004
tblVehicleEF	LHD1	0.21	0.13
tblVehicleEF	LHD1	0.55	0.19
tblVehicleEF	LHD1	0.37	0.26
tblVehicleEF	LHD1	9.3000e-005	1.0000e-004
tblVehicleEF	LHD1	7.5180e-003	8.1000e-003
tblVehicleEF	LHD1	4.1500e-004	4.0000e-004
tblVehicleEF	LHD1	1.9670e-003	8.0000e-004
tblVehicleEF	LHD1	0.07	0.02
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.0220e-003	3.0000e-004
tblVehicleEF	LHD1	0.25	0.15
tblVehicleEF	LHD1	0.55	0.19
tblVehicleEF	LHD1	0.39	0.28
tblVehicleEF	LHD1	1.0610e-003	1.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.01

tblVehicleEF	LHD1	0.16	0.20
tblVehicleEF	LHD1	2.16	1.31
tblVehicleEF	LHD1	3.38	2.49
tblVehicleEF	LHD1	8.95	9.14
tblVehicleEF	LHD1	734.28	749.43
tblVehicleEF	LHD1	32.09	32.49
tblVehicleEF	LHD1	0.07	0.02
tblVehicleEF	LHD1	0.09	0.02
tblVehicleEF	LHD1	2.02	1.14
tblVehicleEF	LHD1	0.96	1.20
tblVehicleEF	LHD1	9.7000e-004	3.0000e-004
tblVehicleEF	LHD1	0.06	0.01
tblVehicleEF	LHD1	9.8670e-003	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.1260e-003	1.3000e-003
tblVehicleEF	LHD1	8.9300e-004	3.0000e-004
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	2.4670e-003	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0360e-003	1.3000e-003
tblVehicleEF	LHD1	3.5500e-003	1.5000e-003
tblVehicleEF	LHD1	0.08	0.02
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7730e-003	7.0000e-004
tblVehicleEF	LHD1	0.22	0.13
tblVehicleEF	LHD1	0.52	0.18
tblVehicleEF	LHD1	0.31	0.21
tblVehicleEF	LHD1	9.3000e-005	1.0000e-004

tblVehicleEF	LHD1	7.5190e-003	8.1000e-003
tblVehicleEF	LHD1	3.9500e-004	4.0000e-004
tblVehicleEF	LHD1	3.5500e-003	1.5000e-003
tblVehicleEF	LHD1	0.08	0.02
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.7730e-003	7.0000e-004
tblVehicleEF	LHD1	0.25	0.15
tblVehicleEF	LHD1	0.52	0.18
tblVehicleEF	LHD1	0.33	0.23
tblVehicleEF	LHD1	1.0610e-003	1.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.16	0.20
tblVehicleEF	LHD1	2.10	1.29
tblVehicleEF	LHD1	5.19	3.55
tblVehicleEF	LHD1	8.95	9.14
tblVehicleEF	LHD1	734.28	749.43
tblVehicleEF	LHD1	32.09	32.49
tblVehicleEF	LHD1	0.07	0.02
tblVehicleEF	LHD1	0.09	0.02
tblVehicleEF	LHD1	2.08	1.18
tblVehicleEF	LHD1	1.05	1.28
tblVehicleEF	LHD1	9.7000e-004	3.0000e-004
tblVehicleEF	LHD1	0.06	0.01
tblVehicleEF	LHD1	9.8670e-003	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.1260e-003	1.3000e-003
tblVehicleEF	LHD1	8.9300e-004	3.0000e-004

tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	2.4670e-003	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0360e-003	1.3000e-003
tblVehicleEF	LHD1	1.4260e-003	9.0000e-004
tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	8.0000e-004	4.0000e-004
tblVehicleEF	LHD1	0.21	0.13
tblVehicleEF	LHD1	0.60	0.21
tblVehicleEF	LHD1	0.40	0.26
tblVehicleEF	LHD1	9.3000e-005	1.0000e-004
tblVehicleEF	LHD1	7.5180e-003	8.1000e-003
tblVehicleEF	LHD1	4.2600e-004	4.0000e-004
tblVehicleEF	LHD1	1.4260e-003	9.0000e-004
tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	8.0000e-004	4.0000e-004
tblVehicleEF	LHD1	0.24	0.15
tblVehicleEF	LHD1	0.60	0.21
tblVehicleEF	LHD1	0.43	0.28
tblVehicleEF	LHD2	7.1200e-004	1.3000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.7140e-003	0.02
tblVehicleEF	LHD2	0.11	0.18
tblVehicleEF	LHD2	1.27	2.13
tblVehicleEF	LHD2	1.59	4.73
tblVehicleEF	LHD2	9.98	10.19

tblVehicleEF	LHD2	606.16	618.24
tblVehicleEF	LHD2	15.38	15.97
tblVehicleEF	LHD2	9.9440e-003	0.01
tblVehicleEF	LHD2	0.15	0.05
tblVehicleEF	LHD2	2.89	2.08
tblVehicleEF	LHD2	0.44	1.17
tblVehicleEF	LHD2	1.6310e-003	7.0000e-004
tblVehicleEF	LHD2	0.08	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	4.8300e-004	1.6000e-003
tblVehicleEF	LHD2	1.5000e-003	7.0000e-004
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	2.7620e-003	0.01
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	4.2600e-004	1.6000e-003
tblVehicleEF	LHD2	6.7300e-004	1.5000e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.7200e-004	5.0000e-004
tblVehicleEF	LHD2	0.18	0.22
tblVehicleEF	LHD2	0.18	0.43
tblVehicleEF	LHD2	0.15	0.35
tblVehicleEF	LHD2	1.0100e-004	1.0000e-004
tblVehicleEF	LHD2	6.1050e-003	7.2000e-003
tblVehicleEF	LHD2	1.8900e-004	4.0000e-004
tblVehicleEF	LHD2	6.7300e-004	1.5000e-003
tblVehicleEF	LHD2	0.03	0.04

tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	3.7200e-004	5.0000e-004
tblVehicleEF	LHD2	0.20	0.26
tblVehicleEF	LHD2	0.18	0.43
tblVehicleEF	LHD2	0.16	0.38
tblVehicleEF	LHD2	7.1200e-004	1.3000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.7140e-003	0.01
tblVehicleEF	LHD2	0.11	0.18
tblVehicleEF	LHD2	1.26	2.16
tblVehicleEF	LHD2	1.23	3.42
tblVehicleEF	LHD2	9.98	10.19
tblVehicleEF	LHD2	606.16	618.24
tblVehicleEF	LHD2	15.38	15.97
tblVehicleEF	LHD2	9.9440e-003	0.01
tblVehicleEF	LHD2	0.15	0.05
tblVehicleEF	LHD2	2.79	2.11
tblVehicleEF	LHD2	0.42	1.11
tblVehicleEF	LHD2	1.6310e-003	7.0000e-004
tblVehicleEF	LHD2	0.08	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	4.8300e-004	1.6000e-003
tblVehicleEF	LHD2	1.5000e-003	7.0000e-004
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	2.7620e-003	0.01
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	4.2600e-004	1.6000e-003

tblVehicleEF	LHD2	1.2110e-003	3.0000e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.4800e-004	1.1000e-003
tblVehicleEF	LHD2	0.18	0.23
tblVehicleEF	LHD2	0.18	0.41
tblVehicleEF	LHD2	0.13	0.29
tblVehicleEF	LHD2	1.0100e-004	1.0000e-004
tblVehicleEF	LHD2	6.1050e-003	7.2000e-003
tblVehicleEF	LHD2	1.8200e-004	4.0000e-004
tblVehicleEF	LHD2	1.2110e-003	3.0000e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	6.4800e-004	1.1000e-003
tblVehicleEF	LHD2	0.20	0.26
tblVehicleEF	LHD2	0.18	0.41
tblVehicleEF	LHD2	0.14	0.31
tblVehicleEF	LHD2	7.1200e-004	1.3000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.7140e-003	0.02
tblVehicleEF	LHD2	0.11	0.18
tblVehicleEF	LHD2	1.28	2.12
tblVehicleEF	LHD2	1.81	4.84
tblVehicleEF	LHD2	9.98	10.19
tblVehicleEF	LHD2	606.16	618.24
tblVehicleEF	LHD2	15.38	15.97
tblVehicleEF	LHD2	9.9440e-003	0.01
tblVehicleEF	LHD2	0.15	0.05

tblVehicleEF	LHD2	2.86	2.16
tblVehicleEF	LHD2	0.46	1.18
tblVehicleEF	LHD2	1.6310e-003	7.0000e-004
tblVehicleEF	LHD2	0.08	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	4.8300e-004	1.6000e-003
tblVehicleEF	LHD2	1.5000e-003	7.0000e-004
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	2.7620e-003	0.01
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	4.2600e-004	1.6000e-003
tblVehicleEF	LHD2	4.9000e-004	1.8000e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.9000e-004	6.0000e-004
tblVehicleEF	LHD2	0.18	0.22
tblVehicleEF	LHD2	0.20	0.47
tblVehicleEF	LHD2	0.16	0.36
tblVehicleEF	LHD2	1.0100e-004	1.0000e-004
tblVehicleEF	LHD2	6.1050e-003	7.2000e-003
tblVehicleEF	LHD2	1.9300e-004	4.0000e-004
tblVehicleEF	LHD2	4.9000e-004	1.8000e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	2.9000e-004	6.0000e-004
tblVehicleEF	LHD2	0.20	0.26
tblVehicleEF	LHD2	0.20	0.47

tblVehicleEF	LHD2	0.18	0.38
tblVehicleEF	MCY	0.00	0.21
tblVehicleEF	MCY	0.00	0.14
tblVehicleEF	MCY	27.88	29.50
tblVehicleEF	MCY	10.71	10.65
tblVehicleEF	MCY	148.32	145.57
tblVehicleEF	MCY	43.66	46.37
tblVehicleEF	MCY	8.7430e-003	0.01
tblVehicleEF	MCY	1.29	1.22
tblVehicleEF	MCY	0.32	0.31
tblVehicleEF	MCY	0.04	6.3000e-003
tblVehicleEF	MCY	8.0000e-003	4.0000e-003
tblVehicleEF	MCY	6.1000e-004	0.02
tblVehicleEF	MCY	1.9710e-003	0.01
tblVehicleEF	MCY	0.02	6.3000e-003
tblVehicleEF	MCY	2.0000e-003	4.0000e-003
tblVehicleEF	MCY	4.9300e-004	0.02
tblVehicleEF	MCY	1.5590e-003	0.01
tblVehicleEF	MCY	0.64	0.63
tblVehicleEF	MCY	0.44	0.32
tblVehicleEF	MCY	0.31	0.30
tblVehicleEF	MCY	2.74	2.80
tblVehicleEF	MCY	1.74	0.39
tblVehicleEF	MCY	2.32	2.33
tblVehicleEF	MCY	2.0610e-003	2.0000e-003
tblVehicleEF	MCY	6.9400e-004	7.0000e-004
tblVehicleEF	MCY	0.64	0.63
tblVehicleEF	MCY	0.44	0.32

tblVehicleEF	MCY	0.31	0.30
tblVehicleEF	MCY	2.99	3.05
tblVehicleEF	MCY	1.74	0.39
tblVehicleEF	MCY	2.50	2.50
tblVehicleEF	MCY	0.00	0.21
tblVehicleEF	MCY	0.00	0.12
tblVehicleEF	MCY	25.97	27.70
tblVehicleEF	MCY	9.10	8.95
tblVehicleEF	MCY	148.32	145.57
tblVehicleEF	MCY	43.66	46.37
tblVehicleEF	MCY	8.7430e-003	0.01
tblVehicleEF	MCY	1.16	1.19
tblVehicleEF	MCY	0.30	0.29
tblVehicleEF	MCY	0.04	6.3000e-003
tblVehicleEF	MCY	8.0000e-003	4.0000e-003
tblVehicleEF	MCY	6.1000e-004	0.02
tblVehicleEF	MCY	1.9710e-003	0.01
tblVehicleEF	MCY	0.02	6.3000e-003
tblVehicleEF	MCY	2.0000e-003	4.0000e-003
tblVehicleEF	MCY	4.9300e-004	0.02
tblVehicleEF	MCY	1.5590e-003	0.01
tblVehicleEF	MCY	1.26	1.34
tblVehicleEF	MCY	0.49	0.40
tblVehicleEF	MCY	0.67	0.86
tblVehicleEF	MCY	2.62	2.67
tblVehicleEF	MCY	1.57	0.36
tblVehicleEF	MCY	1.95	1.91
tblVehicleEF	MCY	2.0270e-003	1.9000e-003

tblVehicleEF	MCY	6.5700e-004	6.0000e-004
tblVehicleEF	MCY	1.26	1.34
tblVehicleEF	MCY	0.49	0.40
tblVehicleEF	MCY	0.67	0.86
tblVehicleEF	MCY	2.87	2.92
tblVehicleEF	MCY	1.57	0.36
tblVehicleEF	MCY	2.09	2.06
tblVehicleEF	MCY	0.00	0.21
tblVehicleEF	MCY	0.00	0.15
tblVehicleEF	MCY	29.20	29.74
tblVehicleEF	MCY	11.60	10.76
tblVehicleEF	MCY	148.32	145.57
tblVehicleEF	MCY	43.66	46.37
tblVehicleEF	MCY	8.7430e-003	0.01
tblVehicleEF	MCY	1.30	1.31
tblVehicleEF	MCY	0.33	0.31
tblVehicleEF	MCY	0.04	6.3000e-003
tblVehicleEF	MCY	8.0000e-003	4.0000e-003
tblVehicleEF	MCY	6.1000e-004	0.02
tblVehicleEF	MCY	1.9710e-003	0.01
tblVehicleEF	MCY	0.02	6.3000e-003
tblVehicleEF	MCY	2.0000e-003	4.0000e-003
tblVehicleEF	MCY	4.9300e-004	0.02
tblVehicleEF	MCY	1.5590e-003	0.01
tblVehicleEF	MCY	0.47	0.74
tblVehicleEF	MCY	0.57	0.49
tblVehicleEF	MCY	0.21	0.36
tblVehicleEF	MCY	2.81	2.81

tblVehicleEF	MCY	2.07	0.47
tblVehicleEF	MCY	2.53	2.36
tblVehicleEF	MCY	2.0830e-003	2.0000e-003
tblVehicleEF	MCY	7.1400e-004	7.0000e-004
tblVehicleEF	MCY	0.47	0.74
tblVehicleEF	MCY	0.57	0.49
tblVehicleEF	MCY	0.21	0.36
tblVehicleEF	MCY	3.07	3.07
tblVehicleEF	MCY	2.07	0.47
tblVehicleEF	MCY	2.72	2.53
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	2.64	2.80
tblVehicleEF	MDV	7.05	7.31
tblVehicleEF	MDV	500.81	526.05
tblVehicleEF	MDV	114.79	119.65
tblVehicleEF	MDV	0.15	0.08
tblVehicleEF	MDV	0.44	0.44
tblVehicleEF	MDV	0.71	0.76
tblVehicleEF	MDV	0.04	0.01
tblVehicleEF	MDV	2.2910e-003	0.02
tblVehicleEF	MDV	3.9310e-003	0.01
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	2.0000e-003	8.0000e-003
tblVehicleEF	MDV	2.1040e-003	0.02
tblVehicleEF	MDV	3.6200e-003	0.01
tblVehicleEF	MDV	0.07	0.06
tblVehicleEF	MDV	0.22	0.15

tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.08	0.08
tblVehicleEF	MDV	0.75	0.12
tblVehicleEF	MDV	0.61	0.63
tblVehicleEF	MDV	5.6360e-003	5.6000e-003
tblVehicleEF	MDV	1.3890e-003	1.3000e-003
tblVehicleEF	MDV	0.07	0.06
tblVehicleEF	MDV	0.22	0.15
tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.11	0.12
tblVehicleEF	MDV	0.75	0.12
tblVehicleEF	MDV	0.66	0.68
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	2.78	3.02
tblVehicleEF	MDV	5.36	5.31
tblVehicleEF	MDV	521.03	547.18
tblVehicleEF	MDV	114.79	119.65
tblVehicleEF	MDV	0.15	0.08
tblVehicleEF	MDV	0.40	0.43
tblVehicleEF	MDV	0.65	0.69
tblVehicleEF	MDV	0.04	0.01
tblVehicleEF	MDV	2.2910e-003	0.02
tblVehicleEF	MDV	3.9310e-003	0.01
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	2.0000e-003	8.0000e-003
tblVehicleEF	MDV	2.1040e-003	0.02
tblVehicleEF	MDV	3.6200e-003	0.01

tblVehicleEF	MDV	0.13	0.13
tblVehicleEF	MDV	0.23	0.17
tblVehicleEF	MDV	0.11	0.11
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.68	0.11
tblVehicleEF	MDV	0.50	0.50
tblVehicleEF	MDV	5.8660e-003	5.9000e-003
tblVehicleEF	MDV	1.3590e-003	1.3000e-003
tblVehicleEF	MDV	0.13	0.13
tblVehicleEF	MDV	0.23	0.17
tblVehicleEF	MDV	0.11	0.11
tblVehicleEF	MDV	0.12	0.12
tblVehicleEF	MDV	0.68	0.11
tblVehicleEF	MDV	0.54	0.53
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	2.63	2.73
tblVehicleEF	MDV	7.87	7.49
tblVehicleEF	MDV	496.78	521.84
tblVehicleEF	MDV	114.79	119.65
tblVehicleEF	MDV	0.15	0.08
tblVehicleEF	MDV	0.45	0.47
tblVehicleEF	MDV	0.74	0.77
tblVehicleEF	MDV	0.04	0.01
tblVehicleEF	MDV	2.2910e-003	0.02
tblVehicleEF	MDV	3.9310e-003	0.01
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	2.0000e-003	8.0000e-003

tblVehicleEF	MDV	2.1040e-003	0.02
tblVehicleEF	MDV	3.6200e-003	0.01
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.24	0.19
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	0.08	0.08
tblVehicleEF	MDV	0.90	0.14
tblVehicleEF	MDV	0.67	0.64
tblVehicleEF	MDV	5.5910e-003	5.4000e-003
tblVehicleEF	MDV	1.4040e-003	1.3000e-003
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.24	0.19
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	0.11	0.12
tblVehicleEF	MDV	0.90	0.14
tblVehicleEF	MDV	0.72	0.69
tblVehicleEF	MH	0.00	0.04
tblVehicleEF	MH	0.00	0.04
tblVehicleEF	MH	4.83	7.96
tblVehicleEF	MH	10.13	14.05
tblVehicleEF	MH	749.06	765.34
tblVehicleEF	MH	30.29	32.30
tblVehicleEF	MH	4.6800e-003	5.7690e-003
tblVehicleEF	MH	2.05	1.78
tblVehicleEF	MH	0.89	1.14
tblVehicleEF	MH	0.05	0.01
tblVehicleEF	MH	8.6990e-003	0.01
tblVehicleEF	MH	0.04	0.01

tblVehicleEF	MH	1.5180e-003	8.0000e-004
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	2.1750e-003	0.01
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	1.3330e-003	8.0000e-004
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tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.38	0.47
tblVehicleEF	MH	0.19	0.29
tblVehicleEF	MH	2.20	0.02
tblVehicleEF	MH	0.58	0.80
tblVehicleEF	MH	7.7360e-003	7.6000e-003
tblVehicleEF	MH	4.9100e-004	6.0000e-004
tblVehicleEF	MH	0.98	1.25
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.38	0.47
tblVehicleEF	MH	0.23	0.33
tblVehicleEF	MH	2.20	0.02
tblVehicleEF	MH	0.62	0.86
tblVehicleEF	MH	0.00	0.04
tblVehicleEF	MH	0.00	0.03
tblVehicleEF	MH	4.88	8.11
tblVehicleEF	MH	7.34	9.74
tblVehicleEF	MH	749.05	765.34
tblVehicleEF	MH	30.29	32.30
tblVehicleEF	MH	4.6800e-003	5.7690e-003
tblVehicleEF	MH	1.93	1.78
tblVehicleEF	MH	0.84	1.07

tblVehicleEF	MH	0.05	0.01
tblVehicleEF	MH	8.6990e-003	0.01
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	1.5180e-003	8.0000e-004
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	2.1750e-003	0.01
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	1.3330e-003	8.0000e-004
tblVehicleEF	MH	1.74	2.35
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.62	0.93
tblVehicleEF	MH	0.19	0.30
tblVehicleEF	MH	2.12	0.02
tblVehicleEF	MH	0.46	0.61
tblVehicleEF	MH	7.7360e-003	7.6000e-003
tblVehicleEF	MH	4.4300e-004	5.0000e-004
tblVehicleEF	MH	1.74	2.35
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.62	0.93
tblVehicleEF	MH	0.23	0.34
tblVehicleEF	MH	2.12	0.02
tblVehicleEF	MH	0.49	0.65
tblVehicleEF	MH	0.00	0.04
tblVehicleEF	MH	0.00	0.04
tblVehicleEF	MH	4.83	7.94
tblVehicleEF	MH	11.74	14.25
tblVehicleEF	MH	749.05	765.34
tblVehicleEF	MH	30.29	32.30

tblVehicleEF	MH	4.6800e-003	5.7690e-003
tblVehicleEF	MH	2.04	1.89
tblVehicleEF	MH	0.92	1.14
tblVehicleEF	MH	0.05	0.01
tblVehicleEF	MH	8.6990e-003	0.01
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	1.5180e-003	8.0000e-004
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	2.1750e-003	0.01
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	1.3330e-003	8.0000e-004
tblVehicleEF	MH	0.74	1.42
tblVehicleEF	MH	0.11	0.13
tblVehicleEF	MH	0.31	0.62
tblVehicleEF	MH	0.19	0.29
tblVehicleEF	MH	2.34	0.02
tblVehicleEF	MH	0.65	0.81
tblVehicleEF	MH	7.7360e-003	7.6000e-003
tblVehicleEF	MH	5.1800e-004	6.0000e-004
tblVehicleEF	MH	0.74	1.42
tblVehicleEF	MH	0.11	0.13
tblVehicleEF	MH	0.31	0.62
tblVehicleEF	MH	0.23	0.33
tblVehicleEF	MH	2.34	0.02
tblVehicleEF	MH	0.70	0.87
tblVehicleEF	MHD	8.1280e-003	9.0000e-004
tblVehicleEF	MHD	8.6090e-003	0.01
tblVehicleEF	MHD	0.00	0.03

tblVehicleEF	MHD	1.88	0.14
tblVehicleEF	MHD	1.33	2.83
tblVehicleEF	MHD	25.00	8.38
tblVehicleEF	MHD	603.24	599.64
tblVehicleEF	MHD	1,078.06	1,105.07
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tblVehicleEF	MHD	6.58	0.17
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tblVehicleEF	MHD	2.04	0.70
tblVehicleEF	MHD	0.03	2.3000e-003
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tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.10	0.16
tblVehicleEF	MHD	4.5390e-003	1.3000e-003
tblVehicleEF	MHD	0.03	2.3000e-003
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	2.8530e-003	0.01
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tblVehicleEF	MHD	3.8250e-003	1.3000e-003
tblVehicleEF	MHD	3.3460e-003	1.0000e-003
tblVehicleEF	MHD	0.17	0.02
tblVehicleEF	MHD	0.17	0.02
tblVehicleEF	MHD	1.7640e-003	4.0000e-004
tblVehicleEF	MHD	0.22	0.21
tblVehicleEF	MHD	0.72	0.19
tblVehicleEF	MHD	1.65	0.63
tblVehicleEF	MHD	5.9640e-003	1.0000e-004

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tblVehicleEF	MHD	1.0660e-003	3.0000e-004
tblVehicleEF	MHD	3.3460e-003	1.0000e-003
tblVehicleEF	MHD	0.17	0.02
tblVehicleEF	MHD	0.20	0.02
tblVehicleEF	MHD	1.7640e-003	4.0000e-004
tblVehicleEF	MHD	0.25	0.24
tblVehicleEF	MHD	0.72	0.19
tblVehicleEF	MHD	1.77	0.68
tblVehicleEF	MHD	7.6600e-003	9.0000e-004
tblVehicleEF	MHD	8.6090e-003	0.01
tblVehicleEF	MHD	0.00	0.03
tblVehicleEF	MHD	1.36	0.14
tblVehicleEF	MHD	1.33	2.83
tblVehicleEF	MHD	18.92	6.33
tblVehicleEF	MHD	639.07	635.27
tblVehicleEF	MHD	1,078.06	1,105.07
tblVehicleEF	MHD	60.03	66.47
tblVehicleEF	MHD	0.02	0.01
tblVehicleEF	MHD	6.79	0.17
tblVehicleEF	MHD	3.84	5.00
tblVehicleEF	MHD	1.93	0.66
tblVehicleEF	MHD	0.03	2.3000e-003
tblVehicleEF	MHD	0.12	0.01
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.10	0.16
tblVehicleEF	MHD	4.5390e-003	1.3000e-003
tblVehicleEF	MHD	0.02	2.3000e-003

tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	2.8530e-003	0.01
tblVehicleEF	MHD	0.09	0.16
tblVehicleEF	MHD	3.8250e-003	1.3000e-003
tblVehicleEF	MHD	6.2420e-003	1.9000e-003
tblVehicleEF	MHD	0.18	0.02
tblVehicleEF	MHD	0.16	0.02
tblVehicleEF	MHD	3.2020e-003	8.0000e-004
tblVehicleEF	MHD	0.22	0.21
tblVehicleEF	MHD	0.69	0.19
tblVehicleEF	MHD	1.33	0.49
tblVehicleEF	MHD	6.3180e-003	1.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	9.6000e-004	3.0000e-004
tblVehicleEF	MHD	6.2420e-003	1.9000e-003
tblVehicleEF	MHD	0.18	0.02
tblVehicleEF	MHD	0.19	0.02
tblVehicleEF	MHD	3.2020e-003	8.0000e-004
tblVehicleEF	MHD	0.25	0.24
tblVehicleEF	MHD	0.69	0.19
tblVehicleEF	MHD	1.43	0.53
tblVehicleEF	MHD	8.7750e-003	9.0000e-004
tblVehicleEF	MHD	8.6090e-003	0.01
tblVehicleEF	MHD	0.00	0.04
tblVehicleEF	MHD	2.58	0.14
tblVehicleEF	MHD	1.33	2.83
tblVehicleEF	MHD	28.52	8.49
tblVehicleEF	MHD	553.74	550.44

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tblVehicleEF	MHD	6.28	0.17
tblVehicleEF	MHD	3.95	5.13
tblVehicleEF	MHD	2.11	0.70
tblVehicleEF	MHD	0.04	2.3000e-003
tblVehicleEF	MHD	0.12	0.01
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.10	0.16
tblVehicleEF	MHD	4.5390e-003	1.3000e-003
tblVehicleEF	MHD	0.03	2.3000e-003
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	2.8530e-003	0.01
tblVehicleEF	MHD	0.09	0.16
tblVehicleEF	MHD	3.8250e-003	1.3000e-003
tblVehicleEF	MHD	2.3550e-003	1.1000e-003
tblVehicleEF	MHD	0.21	0.03
tblVehicleEF	MHD	0.19	0.02
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tblVehicleEF	MHD	1.84	0.64
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tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	1.1270e-003	3.0000e-004
tblVehicleEF	MHD	2.3550e-003	1.1000e-003
tblVehicleEF	MHD	0.21	0.03

tblVehicleEF	MHD	0.22	0.02
tblVehicleEF	MHD	1.3640e-003	5.0000e-004
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tblVehicleEF	OBUS	2.9060e-003	0.03
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tblVehicleEF	OBUS	2.36	0.18
tblVehicleEF	OBUS	2.00	4.39
tblVehicleEF	OBUS	13.66	14.42
tblVehicleEF	OBUS	571.35	573.90
tblVehicleEF	OBUS	1,072.43	1,087.06
tblVehicleEF	OBUS	35.51	37.41
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tblVehicleEF	OBUS	1.74	1.73
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tblVehicleEF	OBUS	0.09	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.05	0.11
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tblVehicleEF	OBUS	0.04	0.01
tblVehicleEF	OBUS	2.5410e-003	0.01
tblVehicleEF	OBUS	0.04	0.11
tblVehicleEF	OBUS	8.4800e-004	2.5000e-003

tblVehicleEF	OBUS	7.2000e-004	8.0000e-004
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tblVehicleEF	OBUS	7.2000e-004	8.0000e-004
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.47	0.03
tblVehicleEF	OBUS	3.5900e-004	4.0000e-004
tblVehicleEF	OBUS	0.23	0.32
tblVehicleEF	OBUS	0.27	0.25
tblVehicleEF	OBUS	0.84	0.92
tblVehicleEF	OBUS	0.02	1.2000e-003
tblVehicleEF	OBUS	2.9060e-003	0.03
tblVehicleEF	OBUS	0.00	0.04
tblVehicleEF	OBUS	1.72	0.18
tblVehicleEF	OBUS	2.04	4.47
tblVehicleEF	OBUS	10.18	10.64
tblVehicleEF	OBUS	605.30	607.99
tblVehicleEF	OBUS	1,072.43	1,087.06
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tblVehicleEF	OBUS	2.3300e-003	1.2000e-003
tblVehicleEF	OBUS	6.13	0.11

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tblVehicleEF	OBUS	0.02	1.4000e-003
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tblVehicleEF	OBUS	0.01	0.01
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tblVehicleEF	OBUS	0.04	0.01
tblVehicleEF	OBUS	2.5410e-003	0.01
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tblVehicleEF	OBUS	5.9840e-003	1.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	5.4800e-004	4.0000e-004
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tblVehicleEF	OBUS	0.26	0.25

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tblVehicleEF	OBUS	1,072.43	1,087.06
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tblVehicleEF	OBUS	0.05	0.11
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tblVehicleEF	SBUS	2.6630e-003	0.01
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tblVehicleEF	SBUS	3.41	0.08
tblVehicleEF	SBUS	3.04	0.68
tblVehicleEF	SBUS	5.1800e-003	5.4000e-003
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tblVehicleEF	SBUS	0.02	7.5000e-003
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tblVehicleEF	SBUS	3.25	0.72
tblVehicleEF	UBUS	0.00	0.04
tblVehicleEF	UBUS	0.00	0.06
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tblVehicleEF	UBUS	7.19	14.10
tblVehicleEF	UBUS	2,084.88	2,140.27
tblVehicleEF	UBUS	31.79	32.45
tblVehicleEF	UBUS	1.4010e-003	1.1900e-003

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tblVehicleEF	UBUS	0.66	0.01
tblVehicleEF	UBUS	8.0000e-003	9.6000e-003
tblVehicleEF	UBUS	0.21	0.15
tblVehicleEF	UBUS	3.8100e-004	4.8000e-003
tblVehicleEF	UBUS	0.28	0.01
tblVehicleEF	UBUS	2.0000e-003	9.6000e-003
tblVehicleEF	UBUS	0.19	0.15
tblVehicleEF	UBUS	3.5400e-004	4.8000e-003
tblVehicleEF	UBUS	2.6130e-003	4.3000e-003
tblVehicleEF	UBUS	0.06	0.10
tblVehicleEF	UBUS	1.6530e-003	2.6000e-003
tblVehicleEF	UBUS	0.65	0.75
tblVehicleEF	UBUS	0.47	0.02
tblVehicleEF	UBUS	0.61	1.17
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	4.6100e-004	8.0000e-004
tblVehicleEF	UBUS	2.6130e-003	4.3000e-003
tblVehicleEF	UBUS	0.06	0.10
tblVehicleEF	UBUS	1.6530e-003	2.6000e-003
tblVehicleEF	UBUS	0.72	0.83
tblVehicleEF	UBUS	0.47	0.02
tblVehicleEF	UBUS	0.66	1.25
tblVehicleEF	UBUS	0.00	0.04
tblVehicleEF	UBUS	0.00	0.05
tblVehicleEF	UBUS	3.41	4.09
tblVehicleEF	UBUS	5.65	10.91

tblVehicleEF	UBUS	2,084.88	2,140.27
tblVehicleEF	UBUS	31.79	32.45
tblVehicleEF	UBUS	1.4010e-003	1.1900e-003
tblVehicleEF	UBUS	10.90	9.37
tblVehicleEF	UBUS	0.87	1.76
tblVehicleEF	UBUS	0.66	0.01
tblVehicleEF	UBUS	8.0000e-003	9.6000e-003
tblVehicleEF	UBUS	0.21	0.15
tblVehicleEF	UBUS	3.8100e-004	4.8000e-003
tblVehicleEF	UBUS	0.28	0.01
tblVehicleEF	UBUS	2.0000e-003	9.6000e-003
tblVehicleEF	UBUS	0.19	0.15
tblVehicleEF	UBUS	3.5400e-004	4.8000e-003
tblVehicleEF	UBUS	4.5220e-003	7.8000e-003
tblVehicleEF	UBUS	0.06	0.10
tblVehicleEF	UBUS	2.6270e-003	5.0000e-003
tblVehicleEF	UBUS	0.66	0.77
tblVehicleEF	UBUS	0.42	0.02
tblVehicleEF	UBUS	0.53	1.01
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	4.3400e-004	8.0000e-004
tblVehicleEF	UBUS	4.5220e-003	7.8000e-003
tblVehicleEF	UBUS	0.06	0.10
tblVehicleEF	UBUS	2.6270e-003	5.0000e-003
tblVehicleEF	UBUS	0.73	0.86
tblVehicleEF	UBUS	0.42	0.02
tblVehicleEF	UBUS	0.57	1.08
tblVehicleEF	UBUS	0.00	0.04

tblVehicleEF	UBUS	0.00	0.06
tblVehicleEF	UBUS	3.34	3.99
tblVehicleEF	UBUS	8.01	14.28
tblVehicleEF	UBUS	2,084.88	2,140.27
tblVehicleEF	UBUS	31.79	32.45
tblVehicleEF	UBUS	1.4010e-003	1.1900e-003
tblVehicleEF	UBUS	11.18	9.60
tblVehicleEF	UBUS	0.95	1.88
tblVehicleEF	UBUS	0.66	0.01
tblVehicleEF	UBUS	8.0000e-003	9.6000e-003
tblVehicleEF	UBUS	0.21	0.15
tblVehicleEF	UBUS	3.8100e-004	4.8000e-003
tblVehicleEF	UBUS	0.28	0.01
tblVehicleEF	UBUS	2.0000e-003	9.6000e-003
tblVehicleEF	UBUS	0.19	0.15
tblVehicleEF	UBUS	3.5400e-004	4.8000e-003
tblVehicleEF	UBUS	2.1300e-003	4.9000e-003
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	1.3100e-003	3.2000e-003
tblVehicleEF	UBUS	0.64	0.75
tblVehicleEF	UBUS	0.56	0.03
tblVehicleEF	UBUS	0.66	1.18
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	4.7500e-004	8.0000e-004
tblVehicleEF	UBUS	2.1300e-003	4.9000e-003
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	1.3100e-003	3.2000e-003
tblVehicleEF	UBUS	0.72	0.83

tblVehicleEF	UBUS	0.56	0.03
tblVehicleEF	UBUS	0.70	1.26
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	18.9528	221.6903	136.1751	0.2324	18.7826	8.4940	27.2766	9.1667	7.8144	16.9811			24,298.2124	5.2170	0.0000	24,407.7695
2015	39.0035	155.0034	98.7004	0.1898	6.3707	6.5310	12.9017	2.5391	6.0376	8.5767			19,438.8752	3.5467	0.0000	19,513.3567
Total	**57.9563**	**376.6937**	**234.8755**	**0.4221**	**25.1533**	**15.0250**	**40.1783**	**11.7058**	**13.8520**	**25.5578**			**43,737.0877**	**8.7637**	**0.0000**	**43,921.1261**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	12.3808	140.9460	105.9857	0.2324	9.2534	4.5777	13.8311	4.0813	4.2125	8.2938			24,298.2124	5.2170	0.0000	24,407.7695
2015	39.0035	127.2635	92.9968	0.1898	4.5340	4.8955	9.4295	1.5295	4.5334	6.0629			19,438.8752	3.5467	0.0000	19,513.3566
Total	**51.3844**	**268.2095**	**198.9825**	**0.4221**	**13.7874**	**9.4732**	**23.2606**	**5.6108**	**8.7458**	**14.3567**			**43,737.0876**	**8.7637**	**0.0000**	**43,921.1261**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**11.34**	**28.80**	**15.28**	**0.00**	**45.19**	**36.95**	**42.11**	**52.07**	**36.86**	**43.83**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7023	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			5.9000e-004	0.0000		6.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Offroad	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000		0.0000
Total	**1.7023**	**0.0000**	**2.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**5.9000e-004**	**0.0000**	**0.0000**	**6.3000e-004**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7023	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			5.9000e-004	0.0000		6.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Offroad	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000		0.0000
Total	**1.7023**	**0.0000**	**2.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**5.9000e-004**	**0.0000**	**0.0000**	**6.3000e-004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/31/2014	8/30/2014	5	22	Removal of existing rail track, equipment, piping and buldings, if applicable
2	Soil Transport	Site Preparation	9/1/2014	12/31/2014	5	88	Movement of soils onsite
3	Grading	Grading	9/1/2014	12/31/2014	5	88	Grading of spur area
4	Site Preparation - Rail line	Site Preparation	12/17/2014	1/15/2015	5	22	Preparation of the spur area for equipment construction
5	Site Preparation - Pipe line	Site Preparation	1/1/2015	4/2/2015	5	66	Preparation of the pipeline route area for equipment construction
6	Construction - Unloading area	Building Construction	1/1/2015	4/2/2015	5	66	Construction of the unloading equipment and buildings
7	Construction - Paving	Paving	1/1/2015	1/15/2015	5	11	Paving of the roadways and unloading area
8	Commissioning	Architectural Coating	5/1/2015	7/1/2015	5	44	Startup of facilities

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 47

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 111,078; Non-Residential Outdoor: 37,026 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Off-Highway Trucks	3	4.00	381	0.38
Demolition	Rubber Tired Dozers	1	4.00	358	0.40
Demolition	Rubber Tired Dozers	3	8.00	358	0.40
Demolition	Tractors/Loaders/Backhoes	1	4.00	75	0.37
Demolition	Tractors/Loaders/Backhoes	4	8.00	75	0.37
Soil Transport	Off-Highway Trucks	6	4.00	381	0.38
Soil Transport	Rubber Tired Dozers	2	4.00	358	0.40
Grading	Excavators	1	4.00	157	0.38

Grading	Graders	2	4.00	162	0.41
Grading	Off-Highway Trucks	5	4.00	381	0.38
Grading	Rubber Tired Dozers	2	4.00	358	0.40
Grading	Scrapers	2	4.00	356	0.48
Site Preparation - Rail line	Bore/Drill Rigs	1	2.00	82	0.42
Site Preparation - Rail line	Off-Highway Trucks	6	4.00	381	0.38
Site Preparation - Rail line	Plate Compactors	1	2.00	8	0.42
Site Preparation - Rail line	Rubber Tired Dozers	1	4.00	358	0.40
Site Preparation - Rail line	Tractors/Loaders/Backhoes	1	4.00	75	0.37
Site Preparation - Pipe line	Air Compressors	0	6.00	78	0.42
Site Preparation - Pipe line	Cranes	1	2.00	208	0.29
Site Preparation - Pipe line	Off-Highway Trucks	4	4.00	381	0.38
Site Preparation - Pipe line	Plate Compactors	1	2.00	8	0.42
Site Preparation - Pipe line	Tractors/Loaders/Backhoes	1	4.00	75	0.37
Construction - Unloading area	Cranes	1	7.00	208	0.29
Construction - Unloading area	Forklifts	3	8.00	149	0.40
Construction - Unloading area	Generator Sets	1	8.00	84	0.42
Construction - Unloading area	Tractors/Loaders/Backhoes	3	7.00	75	0.37
Construction - Unloading area	Welders	1	8.00	46	0.42
Construction - Paving	Pavers	2	5.00	89	0.42
Construction - Paving	Rollers	2	5.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	12	30.00	0.00	226.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Soil Transport	8	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	30.00	0.00	332.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Rail line	10	23.00	0.00	1,706.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Pipe line	7	23.00	0.00	426.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Construction - Unloading area	9	31.00	0.00	426.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Construction - Paving	4	0.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Commissioning				0.00	13.00	5.00				

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0041	0.0000	1.0041	0.1521	0.0000	0.1521			0.0000			0.0000
Off-Road	9.0409	101.4704	70.8715	0.0733		4.9744	4.9744		4.5765	4.5765			7,785.6201	2.3007		7,833.9356
Total	**9.0409**	**101.4704**	**70.8715**	**0.0733**	**1.0041**	**4.9744**	**5.9785**	**0.1521**	**4.5765**	**4.7285**			**7,785.6201**	**2.3007**		**7,833.9356**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3306	4.4110	3.3144	7.7700e-003	0.1786	0.0784	0.2570	0.0489	0.0721	0.1210			797.1278	7.6300e-003		797.2881
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.2015	0.2869	2.6480	3.2500e-003	0.2966	2.8200e-003	0.2994	0.0787	2.5200e-003	0.0812			289.3125	0.0208		289.7485
Total	**0.5321**	**4.6979**	**5.9625**	**0.0110**	**0.4752**	**0.0812**	**0.5564**	**0.1275**	**0.0746**	**0.2021**			**1,086.4403**	**0.0284**		**1,087.0366**

3.2 Demolition - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3916	0.0000	0.3916	0.0593	0.0000	0.0593			0.0000			0.0000
Off-Road	2.1695	20.8184	35.5446	0.0733		0.7009	0.7009		0.6459	0.6459			7,785.6201	2.3007		7,833.9355
Total	**2.1695**	**20.8184**	**35.5446**	**0.0733**	**0.3916**	**0.7009**	**1.0925**	**0.0593**	**0.6459**	**0.7052**			**7,785.6201**	**2.3007**		**7,833.9355**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3306	4.4110	3.3144	7.7700e-003	0.1786	0.0784	0.2570	0.0489	0.0721	0.1210			797.1278	7.6300e-003		797.2881
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.2015	0.2869	2.6480	3.2500e-003	0.2966	2.8200e-003	0.2994	0.0787	2.5200e-003	0.0812			289.3125	0.0208		289.7485
Total	**0.5321**	**4.6979**	**5.9625**	**0.0110**	**0.4752**	**0.0812**	**0.5564**	**0.1275**	**0.0746**	**0.2021**			**1,086.4403**	**0.0284**		**1,087.0366**

3.3 Soil Transport - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	4.8001	56.2469	31.4665	0.0501		2.3242	2.3242		2.1383	2.1383			5,316.6609	1.5711		5,349.6546
Total	**4.8001**	**56.2469**	**31.4665**	**0.0501**	**6.0221**	**2.3242**	**8.3463**	**3.3102**	**2.1383**	**5.4485**			**5,316.6609**	**1.5711**		**5,349.6546**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.1343	0.1913	1.7653	2.1600e-003	0.1977	1.8800e-003	0.1996	0.0524	1.6800e-003	0.0541			192.8750	0.0138		193.1657
Total	**0.1343**	**0.1913**	**1.7653**	**2.1600e-003**	**0.1977**	**1.8800e-003**	**0.1996**	**0.0524**	**1.6800e-003**	**0.0541**			**192.8750**	**0.0138**		**193.1657**

3.3 Soil Transport - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3486	0.0000	2.3486	1.2910	0.0000	1.2910			0.0000			0.0000
Off-Road	3.1654	36.5516	21.4532	0.0501		1.3784	1.3784		1.2683	1.2683			5,316.6609	1.5711		5,349.6546
Total	**3.1654**	**36.5516**	**21.4532**	**0.0501**	**2.3486**	**1.3784**	**3.7270**	**1.2910**	**1.2683**	**2.5593**			**5,316.6609**	**1.5711**		**5,349.6546**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.1343	0.1913	1.7653	2.1600e-003	0.1977	1.8800e-003	0.1996	0.0524	1.6800e-003	0.0541			192.8750	0.0138		193.1657
Total	**0.1343**	**0.1913**	**1.7653**	**2.1600e-003**	**0.1977**	**1.8800e-003**	**0.1996**	**0.0524**	**1.6800e-003**	**0.0541**			**192.8750**	**0.0138**		**193.1657**

3.4 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5885	0.0000	6.5885	3.3714	0.0000	3.3714			0.0000			0.0000
Off-Road	6.9379	81.6935	46.8533	0.0669		3.5453	3.5453		3.2617	3.2617			7,100.9114	2.0984		7,144.9778
Total	**6.9379**	**81.6935**	**46.8533**	**0.0669**	**6.5885**	**3.5453**	**10.1338**	**3.3714**	**3.2617**	**6.6331**			**7,100.9114**	**2.0984**		**7,144.9778**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1214	1.6200	1.2173	2.8500e-003	0.0656	0.0288	0.0944	0.0180	0.0265	0.0444			292.7505	2.8000e-003		292.8094
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.2015	0.2869	2.6480	3.2500e-003	0.2966	2.8200e-003	0.2994	0.0787	2.5200e-003	0.0812			289.3125	0.0208		289.7485
Total	**0.3229**	**1.9069**	**3.8653**	**6.1000e-003**	**0.3622**	**0.0316**	**0.3938**	**0.0966**	**0.0290**	**0.1256**			**582.0629**	**0.0236**		**582.5578**

3.4 Grading - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5695	0.0000	2.5695	1.3148	0.0000	1.3148			0.0000			0.0000
Off-Road	2.9458	31.7941	31.7151	0.0669		1.1548	1.1548		1.0631	1.0631			7,100.9114	2.0984		7,144.9778
Total	**2.9458**	**31.7941**	**31.7151**	**0.0669**	**2.5695**	**1.1548**	**3.7243**	**1.3148**	**1.0631**	**2.3780**			**7,100.9114**	**2.0984**		**7,144.9778**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1214	1.6200	1.2173	2.8500e-003	0.0656	0.0288	0.0944	0.0180	0.0265	0.0444			292.7505	2.8000e-003		292.8094
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.2015	0.2869	2.6480	3.2500e-003	0.2966	2.8200e-003	0.2994	0.0787	2.5200e-003	0.0812			289.3125	0.0208		289.7485
Total	**0.3229**	**1.9069**	**3.8653**	**6.1000e-003**	**0.3622**	**0.0316**	**0.3938**	**0.0966**	**0.0290**	**0.1256**			**582.0629**	**0.0236**		**582.5578**

3.5 Site Preparation - Rail line - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0110	0.0000	3.0110	1.6551	0.0000	1.6551			0.0000			0.0000
Off-Road	4.1076	48.1350	25.1749	0.0459		1.9973	1.9973		1.8377	1.8377			4,866.6391	1.4365		4,896.8063
Total	**4.1076**	**48.1350**	**25.1749**	**0.0459**	**3.0110**	**1.9973**	**5.0083**	**1.6551**	**1.8377**	**3.4928**			**4,866.6391**	**1.4365**		**4,896.8063**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.4955	33.2968	25.0197	0.0586	2.3737	0.5916	2.9652	0.6206	0.5441	1.1647			6,017.2569	0.0576		6,018.4668
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.1545	0.2200	2.0301	2.4900e-003	0.2274	2.1600e-003	0.2295	0.0603	1.9300e-003	0.0622			221.8062	0.0159		222.1405
Total	**2.6500**	**33.5168**	**27.0498**	**0.0611**	**2.6011**	**0.5937**	**3.1948**	**0.6809**	**0.5461**	**1.2270**			**6,239.0631**	**0.0735**		**6,240.6073**

3.5 Site Preparation - Rail line - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1743	0.0000	1.1743	0.6455	0.0000	0.6455			0.0000			0.0000
Off-Road	3.1625	36.9853	20.1370	0.0459		1.4174	1.4174		1.3043	1.3043			4,866.6391	1.4365		4,896.8063
Total	**3.1625**	**36.9853**	**20.1370**	**0.0459**	**1.1743**	**1.4174**	**2.5917**	**0.6455**	**1.3043**	**1.9498**			**4,866.6391**	**1.4365**		**4,896.8063**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.4955	33.2968	25.0197	0.0586	2.3737	0.5916	2.9652	0.6206	0.5441	1.1647			6,017.2569	0.0576		6,018.4668
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.1545	0.2200	2.0301	2.4900e-003	0.2274	2.1600e-003	0.2295	0.0603	1.9300e-003	0.0622			221.8062	0.0159		222.1405
Total	**2.6500**	**33.5168**	**27.0498**	**0.0611**	**2.6011**	**0.5937**	**3.1948**	**0.6809**	**0.5461**	**1.2270**			**6,239.0631**	**0.0735**		**6,240.6073**

3.5 Site Preparation - Rail line - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0110	0.0000	3.0110	1.6551	0.0000	1.6551			0.0000			0.0000
Off-Road	4.0364	46.7851	24.8026	0.0459		1.9387	1.9387		1.7838	1.7838			4,817.6519	1.4366		4,847.8212
Total	**4.0364**	**46.7851**	**24.8026**	**0.0459**	**3.0110**	**1.9387**	**4.9497**	**1.6551**	**1.7838**	**3.4389**			**4,817.6519**	**1.4366**		**4,847.8212**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.3049	28.8546	23.7879	0.0585	2.3739	0.4356	2.8095	0.6207	0.4006	1.0213			5,943.4186	0.0499		5,944.4668
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.1312	0.1913	1.7367	2.4800e-003	0.2274	1.9500e-003	0.2293	0.0603	1.7500e-003	0.0621			214.1530	0.0141		214.4482
Total	**2.4362**	**29.0459**	**25.5246**	**0.0610**	**2.6013**	**0.4376**	**3.0389**	**0.6810**	**0.4024**	**1.0834**			**6,157.5716**	**0.0640**		**6,158.9151**

3.5 Site Preparation - Rail line - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1743	0.0000	1.1743	0.6455	0.0000	0.6455			0.0000			0.0000
Off-Road	3.0938	35.7510	19.8435	0.0459		1.3654	1.3654		1.2565	1.2565			4,817.6519	1.4366		4,847.8212
Total	**3.0938**	**35.7510**	**19.8435**	**0.0459**	**1.1743**	**1.3654**	**2.5397**	**0.6455**	**1.2565**	**1.9020**			**4,817.6519**	**1.4366**		**4,847.8212**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.3049	28.8546	23.7879	0.0585	2.3739	0.4356	2.8095	0.6207	0.4006	1.0213			5,943.4186	0.0499		5,944.4668
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.1312	0.1913	1.7367	2.4800e-003	0.2274	1.9500e-003	0.2293	0.0603	1.7500e-003	0.0621			214.1530	0.0141		214.4482
Total	**2.4362**	**29.0459**	**25.5246**	**0.0610**	**2.6013**	**0.4376**	**3.0389**	**0.6810**	**0.4024**	**1.0834**			**6,157.5716**	**0.0640**		**6,158.9151**

3.6 Site Preparation - Pipe line - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.2834	26.5393	12.0962	0.0277		1.0820	1.0820		0.9957	0.9957			2,905.7054	0.8658		2,923.8879
Total	**2.2834**	**26.5393**	**12.0962**	**0.0277**	**0.0000**	**1.0820**	**1.0820**	**0.0000**	**0.9957**	**0.9957**			**2,905.7054**	**0.8658**		**2,923.8879**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1919	2.4017	1.9800	4.8700e-003	0.1123	0.0363	0.1485	0.0307	0.0334	0.0641			494.7042	4.1500e-003		494.7915
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.1312	0.1913	1.7367	2.4800e-003	0.2274	1.9500e-003	0.2293	0.0603	1.7500e-003	0.0621			214.1530	0.0141		214.4482
Total	**0.3231**	**2.5930**	**3.7167**	**7.3500e-003**	**0.3396**	**0.0382**	**0.3779**	**0.0910**	**0.0351**	**0.1261**			**708.8573**	**0.0182**		**709.2397**

3.6 Site Preparation - Pipe line - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	2.0039	23.3182	11.9433	0.0277		0.8863	0.8863		0.8156	0.8156			2,905.7054	0.8658		2,923.8879
Total	**2.0039**	**23.3182**	**11.9433**	**0.0277**	**0.0000**	**0.8863**	**0.8863**	**0.0000**	**0.8156**	**0.8156**			**2,905.7054**	**0.8658**		**2,923.8879**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1919	2.4017	1.9800	4.8700e-003	0.1123	0.0363	0.1485	0.0307	0.0334	0.0641			494.7042	4.1500e-003		494.7915
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.1312	0.1913	1.7367	2.4800e-003	0.2274	1.9500e-003	0.2293	0.0603	1.7500e-003	0.0621			214.1530	0.0141		214.4482
Total	**0.3231**	**2.5930**	**3.7167**	**7.3500e-003**	**0.3396**	**0.0382**	**0.3779**	**0.0910**	**0.0351**	**0.1261**			**708.8573**	**0.0182**		**709.2397**

3.7 Construction - Unloading area - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.1024	38.1165	22.5648	0.0323		2.2874	2.2874		2.1334	2.1334			3,301.8187	0.9109		3,320.9479
Total	**4.1024**	**38.1165**	**22.5648**	**0.0323**		**2.2874**	**2.2874**		**2.1334**	**2.1334**			**3,301.8187**	**0.9109**		**3,320.9479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1919	2.4017	1.9800	4.8700e-003	0.1123	0.0363	0.1485	0.0307	0.0334	0.0641			494.7042	4.1500e-003		494.7915
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.1769	0.2579	2.3408	3.3500e-003	0.3065	2.6200e-003	0.3091	0.0813	2.3600e-003	0.0836			288.6410	0.0190		289.0389
Total	**0.3687**	**2.6596**	**4.3208**	**8.2200e-003**	**0.4187**	**0.0389**	**0.4576**	**0.1120**	**0.0357**	**0.1477**			**783.3453**	**0.0231**		**783.8304**

3.7 Construction - Unloading area - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9062	24.6318	21.9732	0.0323		1.4209	1.4209		1.3364	1.3364			3,301.8187	0.9109		3,320.9479
Total	**2.9062**	**24.6318**	**21.9732**	**0.0323**		**1.4209**	**1.4209**		**1.3364**	**1.3364**			**3,301.8187**	**0.9109**		**3,320.9479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1919	2.4017	1.9800	4.8700e-003	0.1123	0.0363	0.1485	0.0307	0.0334	0.0641			494.7042	4.1500e-003		494.7915
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.1769	0.2579	2.3408	3.3500e-003	0.3065	2.6200e-003	0.3091	0.0813	2.3600e-003	0.0836			288.6410	0.0190		289.0389
Total	**0.3687**	**2.6596**	**4.3208**	**8.2200e-003**	**0.4187**	**0.0389**	**0.4576**	**0.1120**	**0.0357**	**0.1477**			**783.3453**	**0.0231**		**783.8304**

3.8 Construction - Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0183	9.2639	5.6747	7.2700e-003		0.7083	0.7083		0.6516	0.6516			763.9250	0.2281		768.7144
Paving	0.4049					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4232**	**9.2639**	**5.6747**	**7.2700e-003**		**0.7083**	**0.7083**		**0.6516**	**0.6516**			**763.9250**	**0.2281**		**768.7144**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**	**0.0000**		**0.0000**

3.8 Construction - Paving - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0183	9.2639	5.6747	7.2700e-003		0.7083	0.7083		0.6516	0.6516			763.9250	0.2281		768.7144
Paving	0.4049					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.4232**	**9.2639**	**5.6747**	**7.2700e-003**		**0.7083**	**0.7083**		**0.6516**	**0.6516**			**763.9250**	**0.2281**		**768.7144**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**	**0.0000**		**0.0000**

3.9 Commissioning - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.0035					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**39.0035**					**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**			**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

3.9 Commissioning - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.0035					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**39.0035**					**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**			**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**			**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
User Defined Industrial	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.440203	0.187725	0.202335	0.081928	0.024463	0.012999	0.013453	0.015831	0.001200	0.001190	0.011748	0.001156	0.005769

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7023	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			5.9000e-004	0.0000		6.3000e-004
Unmitigated	1.7023	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			5.9000e-004	0.0000		6.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1175					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5847					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			5.9000e-004	0.0000		6.3000e-004
Total	**1.7023**	**0.0000**	**2.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**5.9000e-004**	**0.0000**		**6.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1175					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5847					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			5.9000e-004	0.0000		6.3000e-004
Total	**1.7023**	**0.0000**	**2.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**5.9000e-004**	**0.0000**		**6.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Off-Highway Trucks	0	0.00	0	381	0.38	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Off-Highway Trucks	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**	**0.0000**		**0.0000**

10.0 Vegetation

Phillips 66 Santa Maria

San Luis Obispo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	47.00	0.00	0
Other Asphalt Surfaces	1.70	Acre	1.70	74,052.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - edit

Construction Phase - assumptions

Off-road Equipment -

Off-road Equipment - Applicant data and data pn paving requirements

Off-road Equipment - applicant data

Off-road Equipment - Applicant info

Off-road Equipment - site assumptions

Off-road Equipment - assumptions

Off-road Equipment - assumption

Off-road Equipment - site assumptions

Off-road Equipment - assumption

Trips and VMT - demolition material to be sent offsite
Soil transport onsite handled by on-site equipment levels and use

Demolition -

Grading - total site disturbance

Road Dust - test

Water And Wastewater - onsite septic only

Construction Off-road Equipment Mitigation - Standard and BACT

Operational Off-Road Equipment - truck use along rail spur dirt road

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	111078	0
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
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tblConstEquipMitigation	DPF	No Change	Level 3

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	75.00	88.00
tblConstructionPhase	NumDays	55.00	11.00
tblConstructionPhase	NumDays	30.00	88.00
tblConstructionPhase	NumDays	30.00	22.00
tblConstructionPhase	NumDays	30.00	66.00
tblConstructionPhase	PhaseEndDate	3/18/2015	7/1/2015
tblConstructionPhase	PhaseEndDate	7/3/2015	4/2/2015
tblConstructionPhase	PhaseEndDate	8/29/2014	8/30/2014
tblConstructionPhase	PhaseEndDate	5/4/2015	12/31/2014
tblConstructionPhase	PhaseEndDate	4/17/2015	1/15/2015
tblConstructionPhase	PhaseEndDate	1/30/2015	1/15/2015
tblConstructionPhase	PhaseEndDate	4/17/2015	4/2/2015
tblConstructionPhase	PhaseStartDate	1/16/2015	5/1/2015

tblConstructionPhase	PhaseStartDate	4/3/2015	1/1/2015
tblConstructionPhase	PhaseStartDate	1/1/2015	9/1/2014
tblConstructionPhase	PhaseStartDate	4/3/2015	1/1/2015
tblConstructionPhase	PhaseStartDate	8/31/2014	9/1/2014
tblConstructionPhase	PhaseStartDate	1/1/2015	12/17/2014
tblConstructionPhase	PhaseStartDate	1/16/2015	1/1/2015
tblGrading	AcresOfGrading	132.00	47.00
tblLandUse	LotAcreage	0.00	47.00
tblOffRoadEquipment	HorsePower	226.00	208.00
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tblOffRoadEquipment	HorsePower	400.00	381.00
tblOffRoadEquipment	HorsePower	400.00	381.00

tblOffRoadEquipment	HorsePower	400.00	381.00
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tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00

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tblOffRoadEquipment	UsageHours	8.00	4.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	0.00
tblOperationalOffRoadEquipment	OperHorsePower	400.00	381.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripNumber	99.00	226.00
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tblTripsAndVMT	HaulingTripNumber	0.00	1,706.00
tblTripsAndVMT	HaulingTripNumber	0.00	426.00
tblTripsAndVMT	HaulingTripNumber	0.00	426.00
tblTripsAndVMT	VendorTripNumber	12.00	0.00
tblTripsAndVMT	WorkerTripNumber	25.00	23.00
tblTripsAndVMT	WorkerTripNumber	18.00	23.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblVehicleEF	HHD	0.02	0.07
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	0.00	0.13
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tblVehicleEF	HHD	0.02	0.08
tblVehicleEF	HHD	0.01	0.03
tblVehicleEF	HHD	0.00	0.13
tblVehicleEF	HHD	3.74	10.13
tblVehicleEF	HHD	1.33	3.97
tblVehicleEF	HHD	102.00	35.05
tblVehicleEF	HHD	519.55	528.00
tblVehicleEF	HHD	1,681.93	1,721.44
tblVehicleEF	HHD	65.88	68.22
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	5.05	18.06
tblVehicleEF	HHD	6.73	8.71
tblVehicleEF	HHD	5.98	3.95
tblVehicleEF	HHD	0.02	0.21
tblVehicleEF	HHD	0.06	0.02
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.09	0.29

tblVehicleEF	HHD	6.6660e-003	2.5000e-003
tblVehicleEF	HHD	0.02	0.21
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	8.6600e-003	0.03
tblVehicleEF	HHD	0.08	0.29
tblVehicleEF	HHD	5.4820e-003	2.5000e-003
tblVehicleEF	HHD	2.6080e-003	1.3000e-003
tblVehicleEF	HHD	0.35	0.04
tblVehicleEF	HHD	0.54	1.78
tblVehicleEF	HHD	1.7350e-003	8.0000e-004
tblVehicleEF	HHD	0.25	0.70
tblVehicleEF	HHD	1.44	0.03
tblVehicleEF	HHD	5.14	2.32
tblVehicleEF	HHD	5.1360e-003	9.5000e-003
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	2.4450e-003	8.0000e-004
tblVehicleEF	HHD	2.6080e-003	1.3000e-003
tblVehicleEF	HHD	0.35	0.04
tblVehicleEF	HHD	0.61	2.03
tblVehicleEF	HHD	1.7350e-003	8.0000e-004
tblVehicleEF	HHD	0.28	0.79
tblVehicleEF	HHD	1.44	0.03
tblVehicleEF	HHD	5.51	2.48
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	1.26	1.83
tblVehicleEF	LDA	2.84	4.79
tblVehicleEF	LDA	264.46	286.67

tblVehicleEF	LDA	61.62	66.44
tblVehicleEF	LDA	0.46	0.44
tblVehicleEF	LDA	0.14	0.19
tblVehicleEF	LDA	0.19	0.31
tblVehicleEF	LDA	0.04	0.01
tblVehicleEF	LDA	1.9850e-003	9.4000e-003
tblVehicleEF	LDA	3.2170e-003	6.4000e-003
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	2.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.8090e-003	9.4000e-003
tblVehicleEF	LDA	2.9410e-003	6.4000e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.14	0.17
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.34	0.08
tblVehicleEF	LDA	0.23	0.40
tblVehicleEF	LDA	3.2540e-003	3.3000e-003
tblVehicleEF	LDA	7.8400e-004	8.0000e-004
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.14	0.17
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.06	0.08
tblVehicleEF	LDA	0.34	0.08
tblVehicleEF	LDA	0.24	0.42
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	1.33	2.00

tblVehicleEF	LDA	2.17	3.48
tblVehicleEF	LDA	275.59	298.70
tblVehicleEF	LDA	61.62	66.44
tblVehicleEF	LDA	0.46	0.44
tblVehicleEF	LDA	0.12	0.18
tblVehicleEF	LDA	0.18	0.28
tblVehicleEF	LDA	0.04	0.01
tblVehicleEF	LDA	1.9850e-003	9.4000e-003
tblVehicleEF	LDA	3.2170e-003	6.4000e-003
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	2.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.8090e-003	9.4000e-003
tblVehicleEF	LDA	2.9410e-003	6.4000e-003
tblVehicleEF	LDA	0.08	0.15
tblVehicleEF	LDA	0.15	0.19
tblVehicleEF	LDA	0.06	0.11
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.32	0.08
tblVehicleEF	LDA	0.18	0.31
tblVehicleEF	LDA	3.3930e-003	3.5000e-003
tblVehicleEF	LDA	7.7200e-004	8.0000e-004
tblVehicleEF	LDA	0.08	0.15
tblVehicleEF	LDA	0.15	0.19
tblVehicleEF	LDA	0.06	0.11
tblVehicleEF	LDA	0.06	0.08
tblVehicleEF	LDA	0.32	0.08
tblVehicleEF	LDA	0.20	0.33
tblVehicleEF	LDA	0.01	0.01

tblVehicleEF	LDA	0.01	0.02
tblVehicleEF	LDA	1.26	1.79
tblVehicleEF	LDA	3.17	4.91
tblVehicleEF	LDA	262.24	284.27
tblVehicleEF	LDA	61.62	66.44
tblVehicleEF	LDA	0.46	0.44
tblVehicleEF	LDA	0.14	0.20
tblVehicleEF	LDA	0.20	0.32
tblVehicleEF	LDA	0.04	0.01
tblVehicleEF	LDA	1.9850e-003	9.4000e-003
tblVehicleEF	LDA	3.2170e-003	6.4000e-003
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	2.0000e-003	8.0000e-003
tblVehicleEF	LDA	1.8090e-003	9.4000e-003
tblVehicleEF	LDA	2.9410e-003	6.4000e-003
tblVehicleEF	LDA	0.04	0.07
tblVehicleEF	LDA	0.16	0.21
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.39	0.09
tblVehicleEF	LDA	0.25	0.40
tblVehicleEF	LDA	3.2270e-003	3.2000e-003
tblVehicleEF	LDA	7.8900e-004	8.0000e-004
tblVehicleEF	LDA	0.04	0.07
tblVehicleEF	LDA	0.16	0.21
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.06	0.07
tblVehicleEF	LDA	0.39	0.09

tblVehicleEF	LDA	0.26	0.43
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	3.16	4.12
tblVehicleEF	LDT1	5.43	8.27
tblVehicleEF	LDT1	320.87	343.62
tblVehicleEF	LDT1	74.98	80.88
tblVehicleEF	LDT1	0.04	0.19
tblVehicleEF	LDT1	0.33	0.50
tblVehicleEF	LDT1	0.31	0.45
tblVehicleEF	LDT1	0.04	0.01
tblVehicleEF	LDT1	3.4520e-003	0.01
tblVehicleEF	LDT1	4.6840e-003	8.3000e-003
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	2.0000e-003	8.0000e-003
tblVehicleEF	LDT1	3.0790e-003	0.01
tblVehicleEF	LDT1	4.2060e-003	8.3000e-003
tblVehicleEF	LDT1	0.10	0.12
tblVehicleEF	LDT1	0.26	0.26
tblVehicleEF	LDT1	0.07	0.08
tblVehicleEF	LDT1	0.13	0.14
tblVehicleEF	LDT1	0.88	0.22
tblVehicleEF	LDT1	0.43	0.63
tblVehicleEF	LDT1	3.8050e-003	4.1000e-003
tblVehicleEF	LDT1	9.5700e-004	1.0000e-003
tblVehicleEF	LDT1	0.10	0.12
tblVehicleEF	LDT1	0.26	0.26
tblVehicleEF	LDT1	0.07	0.08

tblVehicleEF	LDT1	0.16	0.18
tblVehicleEF	LDT1	0.88	0.22
tblVehicleEF	LDT1	0.46	0.67
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.02
tblVehicleEF	LDT1	3.23	4.37
tblVehicleEF	LDT1	4.18	6.01
tblVehicleEF	LDT1	333.47	356.91
tblVehicleEF	LDT1	74.98	80.88
tblVehicleEF	LDT1	0.04	0.19
tblVehicleEF	LDT1	0.30	0.49
tblVehicleEF	LDT1	0.28	0.41
tblVehicleEF	LDT1	0.04	0.01
tblVehicleEF	LDT1	3.4520e-003	0.01
tblVehicleEF	LDT1	4.6840e-003	8.3000e-003
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	2.0000e-003	8.0000e-003
tblVehicleEF	LDT1	3.0790e-003	0.01
tblVehicleEF	LDT1	4.2060e-003	8.3000e-003
tblVehicleEF	LDT1	0.18	0.25
tblVehicleEF	LDT1	0.26	0.29
tblVehicleEF	LDT1	0.12	0.19
tblVehicleEF	LDT1	0.13	0.15
tblVehicleEF	LDT1	0.79	0.20
tblVehicleEF	LDT1	0.35	0.50
tblVehicleEF	LDT1	3.9550e-003	4.3000e-003
tblVehicleEF	LDT1	9.3500e-004	9.0000e-004
tblVehicleEF	LDT1	0.18	0.25

tblVehicleEF	LDT1	0.26	0.29
tblVehicleEF	LDT1	0.12	0.19
tblVehicleEF	LDT1	0.16	0.18
tblVehicleEF	LDT1	0.79	0.20
tblVehicleEF	LDT1	0.38	0.53
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	3.20	4.05
tblVehicleEF	LDT1	6.04	8.46
tblVehicleEF	LDT1	318.36	340.97
tblVehicleEF	LDT1	74.98	80.88
tblVehicleEF	LDT1	0.04	0.19
tblVehicleEF	LDT1	0.34	0.54
tblVehicleEF	LDT1	0.32	0.46
tblVehicleEF	LDT1	0.04	0.01
tblVehicleEF	LDT1	3.4520e-003	0.01
tblVehicleEF	LDT1	4.6840e-003	8.3000e-003
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	2.0000e-003	8.0000e-003
tblVehicleEF	LDT1	3.0790e-003	0.01
tblVehicleEF	LDT1	4.2060e-003	8.3000e-003
tblVehicleEF	LDT1	0.07	0.13
tblVehicleEF	LDT1	0.30	0.33
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	1.05	0.27
tblVehicleEF	LDT1	0.47	0.64
tblVehicleEF	LDT1	3.7760e-003	4.0000e-003

tblVehicleEF	LDT1	9.6800e-004	1.0000e-003
tblVehicleEF	LDT1	0.07	0.13
tblVehicleEF	LDT1	0.30	0.33
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.16	0.18
tblVehicleEF	LDT1	1.05	0.27
tblVehicleEF	LDT1	0.51	0.68
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.92	2.69
tblVehicleEF	LDT2	4.63	6.55
tblVehicleEF	LDT2	381.86	405.99
tblVehicleEF	LDT2	88.00	93.08
tblVehicleEF	LDT2	0.21	0.20
tblVehicleEF	LDT2	0.29	0.40
tblVehicleEF	LDT2	0.42	0.63
tblVehicleEF	LDT2	0.04	0.01
tblVehicleEF	LDT2	2.2050e-003	0.02
tblVehicleEF	LDT2	3.5240e-003	0.01
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	2.0000e-003	8.0000e-003
tblVehicleEF	LDT2	2.0260e-003	0.02
tblVehicleEF	LDT2	3.2470e-003	0.01
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	0.19	0.18
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.06	0.08
tblVehicleEF	LDT2	0.66	0.15

tblVehicleEF	LDT2	0.36	0.51
tblVehicleEF	LDT2	4.4480e-003	4.1000e-003
tblVehicleEF	LDT2	1.0860e-003	1.0000e-003
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	0.19	0.18
tblVehicleEF	LDT2	0.05	0.05
tblVehicleEF	LDT2	0.08	0.11
tblVehicleEF	LDT2	0.66	0.15
tblVehicleEF	LDT2	0.39	0.55
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.04	2.91
tblVehicleEF	LDT2	3.51	4.74
tblVehicleEF	LDT2	397.40	422.39
tblVehicleEF	LDT2	88.00	93.08
tblVehicleEF	LDT2	0.21	0.20
tblVehicleEF	LDT2	0.26	0.39
tblVehicleEF	LDT2	0.39	0.57
tblVehicleEF	LDT2	0.04	0.01
tblVehicleEF	LDT2	2.2050e-003	0.02
tblVehicleEF	LDT2	3.5240e-003	0.01
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	2.0000e-003	8.0000e-003
tblVehicleEF	LDT2	2.0260e-003	0.02
tblVehicleEF	LDT2	3.2470e-003	0.01
tblVehicleEF	LDT2	0.12	0.16
tblVehicleEF	LDT2	0.20	0.20
tblVehicleEF	LDT2	0.09	0.12

tblVehicleEF	LDT2	0.06	0.08
tblVehicleEF	LDT2	0.59	0.13
tblVehicleEF	LDT2	0.30	0.40
tblVehicleEF	LDT2	4.6300e-003	4.4000e-003
tblVehicleEF	LDT2	1.0660e-003	9.0000e-004
tblVehicleEF	LDT2	0.12	0.16
tblVehicleEF	LDT2	0.20	0.20
tblVehicleEF	LDT2	0.09	0.12
tblVehicleEF	LDT2	0.08	0.11
tblVehicleEF	LDT2	0.59	0.13
tblVehicleEF	LDT2	0.32	0.43
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	1.91	2.63
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tblVehicleEF	LDT2	378.77	402.73
tblVehicleEF	LDT2	88.00	93.08
tblVehicleEF	LDT2	0.21	0.20
tblVehicleEF	LDT2	0.30	0.43
tblVehicleEF	LDT2	0.44	0.63
tblVehicleEF	LDT2	0.04	0.01
tblVehicleEF	LDT2	2.2050e-003	0.02
tblVehicleEF	LDT2	3.5240e-003	0.01
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	2.0000e-003	8.0000e-003
tblVehicleEF	LDT2	2.0260e-003	0.02
tblVehicleEF	LDT2	3.2470e-003	0.01
tblVehicleEF	LDT2	0.05	0.08

tblVehicleEF	LDT2	0.21	0.22
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.06	0.08
tblVehicleEF	LDT2	0.80	0.18
tblVehicleEF	LDT2	0.40	0.52
tblVehicleEF	LDT2	4.4110e-003	4.0000e-003
tblVehicleEF	LDT2	1.0950e-003	1.0000e-003
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.21	0.22
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.08	0.10
tblVehicleEF	LDT2	0.80	0.18
tblVehicleEF	LDT2	0.42	0.56
tblVehicleEF	LHD1	1.0610e-003	1.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.16	0.20
tblVehicleEF	LHD1	2.12	1.29
tblVehicleEF	LHD1	4.53	3.46
tblVehicleEF	LHD1	8.95	9.14
tblVehicleEF	LHD1	734.28	749.43
tblVehicleEF	LHD1	32.09	32.49
tblVehicleEF	LHD1	0.07	0.02
tblVehicleEF	LHD1	0.09	0.02
tblVehicleEF	LHD1	2.10	1.13
tblVehicleEF	LHD1	1.02	1.27
tblVehicleEF	LHD1	9.7000e-004	3.0000e-004
tblVehicleEF	LHD1	0.06	0.01

tblVehicleEF	LHD1	9.8670e-003	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.1260e-003	1.3000e-003
tblVehicleEF	LHD1	8.9300e-004	3.0000e-004
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	2.4670e-003	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0360e-003	1.3000e-003
tblVehicleEF	LHD1	1.9670e-003	8.0000e-004
tblVehicleEF	LHD1	0.07	0.02
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.0220e-003	3.0000e-004
tblVehicleEF	LHD1	0.21	0.13
tblVehicleEF	LHD1	0.55	0.19
tblVehicleEF	LHD1	0.37	0.26
tblVehicleEF	LHD1	9.3000e-005	1.0000e-004
tblVehicleEF	LHD1	7.5180e-003	8.1000e-003
tblVehicleEF	LHD1	4.1500e-004	4.0000e-004
tblVehicleEF	LHD1	1.9670e-003	8.0000e-004
tblVehicleEF	LHD1	0.07	0.02
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.0220e-003	3.0000e-004
tblVehicleEF	LHD1	0.25	0.15
tblVehicleEF	LHD1	0.55	0.19
tblVehicleEF	LHD1	0.39	0.28
tblVehicleEF	LHD1	1.0610e-003	1.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.01

tblVehicleEF	LHD1	0.16	0.20
tblVehicleEF	LHD1	2.16	1.31
tblVehicleEF	LHD1	3.38	2.49
tblVehicleEF	LHD1	8.95	9.14
tblVehicleEF	LHD1	734.28	749.43
tblVehicleEF	LHD1	32.09	32.49
tblVehicleEF	LHD1	0.07	0.02
tblVehicleEF	LHD1	0.09	0.02
tblVehicleEF	LHD1	2.02	1.14
tblVehicleEF	LHD1	0.96	1.20
tblVehicleEF	LHD1	9.7000e-004	3.0000e-004
tblVehicleEF	LHD1	0.06	0.01
tblVehicleEF	LHD1	9.8670e-003	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.1260e-003	1.3000e-003
tblVehicleEF	LHD1	8.9300e-004	3.0000e-004
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	2.4670e-003	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0360e-003	1.3000e-003
tblVehicleEF	LHD1	3.5500e-003	1.5000e-003
tblVehicleEF	LHD1	0.08	0.02
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7730e-003	7.0000e-004
tblVehicleEF	LHD1	0.22	0.13
tblVehicleEF	LHD1	0.52	0.18
tblVehicleEF	LHD1	0.31	0.21
tblVehicleEF	LHD1	9.3000e-005	1.0000e-004

tblVehicleEF	LHD1	7.5190e-003	8.1000e-003
tblVehicleEF	LHD1	3.9500e-004	4.0000e-004
tblVehicleEF	LHD1	3.5500e-003	1.5000e-003
tblVehicleEF	LHD1	0.08	0.02
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.7730e-003	7.0000e-004
tblVehicleEF	LHD1	0.25	0.15
tblVehicleEF	LHD1	0.52	0.18
tblVehicleEF	LHD1	0.33	0.23
tblVehicleEF	LHD1	1.0610e-003	1.4000e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.16	0.20
tblVehicleEF	LHD1	2.10	1.29
tblVehicleEF	LHD1	5.19	3.55
tblVehicleEF	LHD1	8.95	9.14
tblVehicleEF	LHD1	734.28	749.43
tblVehicleEF	LHD1	32.09	32.49
tblVehicleEF	LHD1	0.07	0.02
tblVehicleEF	LHD1	0.09	0.02
tblVehicleEF	LHD1	2.08	1.18
tblVehicleEF	LHD1	1.05	1.28
tblVehicleEF	LHD1	9.7000e-004	3.0000e-004
tblVehicleEF	LHD1	0.06	0.01
tblVehicleEF	LHD1	9.8670e-003	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.1260e-003	1.3000e-003
tblVehicleEF	LHD1	8.9300e-004	3.0000e-004

tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	2.4670e-003	0.01
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0360e-003	1.3000e-003
tblVehicleEF	LHD1	1.4260e-003	9.0000e-004
tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	8.0000e-004	4.0000e-004
tblVehicleEF	LHD1	0.21	0.13
tblVehicleEF	LHD1	0.60	0.21
tblVehicleEF	LHD1	0.40	0.26
tblVehicleEF	LHD1	9.3000e-005	1.0000e-004
tblVehicleEF	LHD1	7.5180e-003	8.1000e-003
tblVehicleEF	LHD1	4.2600e-004	4.0000e-004
tblVehicleEF	LHD1	1.4260e-003	9.0000e-004
tblVehicleEF	LHD1	0.09	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	8.0000e-004	4.0000e-004
tblVehicleEF	LHD1	0.24	0.15
tblVehicleEF	LHD1	0.60	0.21
tblVehicleEF	LHD1	0.43	0.28
tblVehicleEF	LHD2	7.1200e-004	1.3000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.7140e-003	0.02
tblVehicleEF	LHD2	0.11	0.18
tblVehicleEF	LHD2	1.27	2.13
tblVehicleEF	LHD2	1.59	4.73
tblVehicleEF	LHD2	9.98	10.19

tblVehicleEF	LHD2	606.16	618.24
tblVehicleEF	LHD2	15.38	15.97
tblVehicleEF	LHD2	9.9440e-003	0.01
tblVehicleEF	LHD2	0.15	0.05
tblVehicleEF	LHD2	2.89	2.08
tblVehicleEF	LHD2	0.44	1.17
tblVehicleEF	LHD2	1.6310e-003	7.0000e-004
tblVehicleEF	LHD2	0.08	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	4.8300e-004	1.6000e-003
tblVehicleEF	LHD2	1.5000e-003	7.0000e-004
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	2.7620e-003	0.01
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	4.2600e-004	1.6000e-003
tblVehicleEF	LHD2	6.7300e-004	1.5000e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.7200e-004	5.0000e-004
tblVehicleEF	LHD2	0.18	0.22
tblVehicleEF	LHD2	0.18	0.43
tblVehicleEF	LHD2	0.15	0.35
tblVehicleEF	LHD2	1.0100e-004	1.0000e-004
tblVehicleEF	LHD2	6.1050e-003	7.2000e-003
tblVehicleEF	LHD2	1.8900e-004	4.0000e-004
tblVehicleEF	LHD2	6.7300e-004	1.5000e-003
tblVehicleEF	LHD2	0.03	0.04

tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	3.7200e-004	5.0000e-004
tblVehicleEF	LHD2	0.20	0.26
tblVehicleEF	LHD2	0.18	0.43
tblVehicleEF	LHD2	0.16	0.38
tblVehicleEF	LHD2	7.1200e-004	1.3000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.7140e-003	0.01
tblVehicleEF	LHD2	0.11	0.18
tblVehicleEF	LHD2	1.26	2.16
tblVehicleEF	LHD2	1.23	3.42
tblVehicleEF	LHD2	9.98	10.19
tblVehicleEF	LHD2	606.16	618.24
tblVehicleEF	LHD2	15.38	15.97
tblVehicleEF	LHD2	9.9440e-003	0.01
tblVehicleEF	LHD2	0.15	0.05
tblVehicleEF	LHD2	2.79	2.11
tblVehicleEF	LHD2	0.42	1.11
tblVehicleEF	LHD2	1.6310e-003	7.0000e-004
tblVehicleEF	LHD2	0.08	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	4.8300e-004	1.6000e-003
tblVehicleEF	LHD2	1.5000e-003	7.0000e-004
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	2.7620e-003	0.01
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	4.2600e-004	1.6000e-003

tblVehicleEF	LHD2	1.2110e-003	3.0000e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.4800e-004	1.1000e-003
tblVehicleEF	LHD2	0.18	0.23
tblVehicleEF	LHD2	0.18	0.41
tblVehicleEF	LHD2	0.13	0.29
tblVehicleEF	LHD2	1.0100e-004	1.0000e-004
tblVehicleEF	LHD2	6.1050e-003	7.2000e-003
tblVehicleEF	LHD2	1.8200e-004	4.0000e-004
tblVehicleEF	LHD2	1.2110e-003	3.0000e-003
tblVehicleEF	LHD2	0.03	0.04
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	6.4800e-004	1.1000e-003
tblVehicleEF	LHD2	0.20	0.26
tblVehicleEF	LHD2	0.18	0.41
tblVehicleEF	LHD2	0.14	0.31
tblVehicleEF	LHD2	7.1200e-004	1.3000e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.7140e-003	0.02
tblVehicleEF	LHD2	0.11	0.18
tblVehicleEF	LHD2	1.28	2.12
tblVehicleEF	LHD2	1.81	4.84
tblVehicleEF	LHD2	9.98	10.19
tblVehicleEF	LHD2	606.16	618.24
tblVehicleEF	LHD2	15.38	15.97
tblVehicleEF	LHD2	9.9440e-003	0.01
tblVehicleEF	LHD2	0.15	0.05

tblVehicleEF	LHD2	2.86	2.16
tblVehicleEF	LHD2	0.46	1.18
tblVehicleEF	LHD2	1.6310e-003	7.0000e-004
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tblVehicleEF	LHD2	0.03	0.03
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tblVehicleEF	LHD2	1.5000e-003	7.0000e-004
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	2.7620e-003	0.01
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	4.2600e-004	1.6000e-003
tblVehicleEF	LHD2	4.9000e-004	1.8000e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.9000e-004	6.0000e-004
tblVehicleEF	LHD2	0.18	0.22
tblVehicleEF	LHD2	0.20	0.47
tblVehicleEF	LHD2	0.16	0.36
tblVehicleEF	LHD2	1.0100e-004	1.0000e-004
tblVehicleEF	LHD2	6.1050e-003	7.2000e-003
tblVehicleEF	LHD2	1.9300e-004	4.0000e-004
tblVehicleEF	LHD2	4.9000e-004	1.8000e-003
tblVehicleEF	LHD2	0.04	0.06
tblVehicleEF	LHD2	0.02	0.03
tblVehicleEF	LHD2	2.9000e-004	6.0000e-004
tblVehicleEF	LHD2	0.20	0.26
tblVehicleEF	LHD2	0.20	0.47

tblVehicleEF	LHD2	0.18	0.38
tblVehicleEF	MCY	0.00	0.21
tblVehicleEF	MCY	0.00	0.14
tblVehicleEF	MCY	27.88	29.50
tblVehicleEF	MCY	10.71	10.65
tblVehicleEF	MCY	148.32	145.57
tblVehicleEF	MCY	43.66	46.37
tblVehicleEF	MCY	8.7430e-003	0.01
tblVehicleEF	MCY	1.29	1.22
tblVehicleEF	MCY	0.32	0.31
tblVehicleEF	MCY	0.04	6.3000e-003
tblVehicleEF	MCY	8.0000e-003	4.0000e-003
tblVehicleEF	MCY	6.1000e-004	0.02
tblVehicleEF	MCY	1.9710e-003	0.01
tblVehicleEF	MCY	0.02	6.3000e-003
tblVehicleEF	MCY	2.0000e-003	4.0000e-003
tblVehicleEF	MCY	4.9300e-004	0.02
tblVehicleEF	MCY	1.5590e-003	0.01
tblVehicleEF	MCY	0.64	0.63
tblVehicleEF	MCY	0.44	0.32
tblVehicleEF	MCY	0.31	0.30
tblVehicleEF	MCY	2.74	2.80
tblVehicleEF	MCY	1.74	0.39
tblVehicleEF	MCY	2.32	2.33
tblVehicleEF	MCY	2.0610e-003	2.0000e-003
tblVehicleEF	MCY	6.9400e-004	7.0000e-004
tblVehicleEF	MCY	0.64	0.63
tblVehicleEF	MCY	0.44	0.32

tblVehicleEF	MCY	0.31	0.30
tblVehicleEF	MCY	2.99	3.05
tblVehicleEF	MCY	1.74	0.39
tblVehicleEF	MCY	2.50	2.50
tblVehicleEF	MCY	0.00	0.21
tblVehicleEF	MCY	0.00	0.12
tblVehicleEF	MCY	25.97	27.70
tblVehicleEF	MCY	9.10	8.95
tblVehicleEF	MCY	148.32	145.57
tblVehicleEF	MCY	43.66	46.37
tblVehicleEF	MCY	8.7430e-003	0.01
tblVehicleEF	MCY	1.16	1.19
tblVehicleEF	MCY	0.30	0.29
tblVehicleEF	MCY	0.04	6.3000e-003
tblVehicleEF	MCY	8.0000e-003	4.0000e-003
tblVehicleEF	MCY	6.1000e-004	0.02
tblVehicleEF	MCY	1.9710e-003	0.01
tblVehicleEF	MCY	0.02	6.3000e-003
tblVehicleEF	MCY	2.0000e-003	4.0000e-003
tblVehicleEF	MCY	4.9300e-004	0.02
tblVehicleEF	MCY	1.5590e-003	0.01
tblVehicleEF	MCY	1.26	1.34
tblVehicleEF	MCY	0.49	0.40
tblVehicleEF	MCY	0.67	0.86
tblVehicleEF	MCY	2.62	2.67
tblVehicleEF	MCY	1.57	0.36
tblVehicleEF	MCY	1.95	1.91
tblVehicleEF	MCY	2.0270e-003	1.9000e-003

tblVehicleEF	MCY	6.5700e-004	6.0000e-004
tblVehicleEF	MCY	1.26	1.34
tblVehicleEF	MCY	0.49	0.40
tblVehicleEF	MCY	0.67	0.86
tblVehicleEF	MCY	2.87	2.92
tblVehicleEF	MCY	1.57	0.36
tblVehicleEF	MCY	2.09	2.06
tblVehicleEF	MCY	0.00	0.21
tblVehicleEF	MCY	0.00	0.15
tblVehicleEF	MCY	29.20	29.74
tblVehicleEF	MCY	11.60	10.76
tblVehicleEF	MCY	148.32	145.57
tblVehicleEF	MCY	43.66	46.37
tblVehicleEF	MCY	8.7430e-003	0.01
tblVehicleEF	MCY	1.30	1.31
tblVehicleEF	MCY	0.33	0.31
tblVehicleEF	MCY	0.04	6.3000e-003
tblVehicleEF	MCY	8.0000e-003	4.0000e-003
tblVehicleEF	MCY	6.1000e-004	0.02
tblVehicleEF	MCY	1.9710e-003	0.01
tblVehicleEF	MCY	0.02	6.3000e-003
tblVehicleEF	MCY	2.0000e-003	4.0000e-003
tblVehicleEF	MCY	4.9300e-004	0.02
tblVehicleEF	MCY	1.5590e-003	0.01
tblVehicleEF	MCY	0.47	0.74
tblVehicleEF	MCY	0.57	0.49
tblVehicleEF	MCY	0.21	0.36
tblVehicleEF	MCY	2.81	2.81

tblVehicleEF	MCY	2.07	0.47
tblVehicleEF	MCY	2.53	2.36
tblVehicleEF	MCY	2.0830e-003	2.0000e-003
tblVehicleEF	MCY	7.1400e-004	7.0000e-004
tblVehicleEF	MCY	0.47	0.74
tblVehicleEF	MCY	0.57	0.49
tblVehicleEF	MCY	0.21	0.36
tblVehicleEF	MCY	3.07	3.07
tblVehicleEF	MCY	2.07	0.47
tblVehicleEF	MCY	2.72	2.53
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	2.64	2.80
tblVehicleEF	MDV	7.05	7.31
tblVehicleEF	MDV	500.81	526.05
tblVehicleEF	MDV	114.79	119.65
tblVehicleEF	MDV	0.15	0.08
tblVehicleEF	MDV	0.44	0.44
tblVehicleEF	MDV	0.71	0.76
tblVehicleEF	MDV	0.04	0.01
tblVehicleEF	MDV	2.2910e-003	0.02
tblVehicleEF	MDV	3.9310e-003	0.01
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	2.0000e-003	8.0000e-003
tblVehicleEF	MDV	2.1040e-003	0.02
tblVehicleEF	MDV	3.6200e-003	0.01
tblVehicleEF	MDV	0.07	0.06
tblVehicleEF	MDV	0.22	0.15

tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.08	0.08
tblVehicleEF	MDV	0.75	0.12
tblVehicleEF	MDV	0.61	0.63
tblVehicleEF	MDV	5.6360e-003	5.6000e-003
tblVehicleEF	MDV	1.3890e-003	1.3000e-003
tblVehicleEF	MDV	0.07	0.06
tblVehicleEF	MDV	0.22	0.15
tblVehicleEF	MDV	0.06	0.05
tblVehicleEF	MDV	0.11	0.12
tblVehicleEF	MDV	0.75	0.12
tblVehicleEF	MDV	0.66	0.68
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	2.78	3.02
tblVehicleEF	MDV	5.36	5.31
tblVehicleEF	MDV	521.03	547.18
tblVehicleEF	MDV	114.79	119.65
tblVehicleEF	MDV	0.15	0.08
tblVehicleEF	MDV	0.40	0.43
tblVehicleEF	MDV	0.65	0.69
tblVehicleEF	MDV	0.04	0.01
tblVehicleEF	MDV	2.2910e-003	0.02
tblVehicleEF	MDV	3.9310e-003	0.01
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	2.0000e-003	8.0000e-003
tblVehicleEF	MDV	2.1040e-003	0.02
tblVehicleEF	MDV	3.6200e-003	0.01

tblVehicleEF	MDV	0.13	0.13
tblVehicleEF	MDV	0.23	0.17
tblVehicleEF	MDV	0.11	0.11
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.68	0.11
tblVehicleEF	MDV	0.50	0.50
tblVehicleEF	MDV	5.8660e-003	5.9000e-003
tblVehicleEF	MDV	1.3590e-003	1.3000e-003
tblVehicleEF	MDV	0.13	0.13
tblVehicleEF	MDV	0.23	0.17
tblVehicleEF	MDV	0.11	0.11
tblVehicleEF	MDV	0.12	0.12
tblVehicleEF	MDV	0.68	0.11
tblVehicleEF	MDV	0.54	0.53
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	2.63	2.73
tblVehicleEF	MDV	7.87	7.49
tblVehicleEF	MDV	496.78	521.84
tblVehicleEF	MDV	114.79	119.65
tblVehicleEF	MDV	0.15	0.08
tblVehicleEF	MDV	0.45	0.47
tblVehicleEF	MDV	0.74	0.77
tblVehicleEF	MDV	0.04	0.01
tblVehicleEF	MDV	2.2910e-003	0.02
tblVehicleEF	MDV	3.9310e-003	0.01
tblVehicleEF	MDV	0.02	0.01
tblVehicleEF	MDV	2.0000e-003	8.0000e-003

tblVehicleEF	MDV	2.1040e-003	0.02
tblVehicleEF	MDV	3.6200e-003	0.01
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.24	0.19
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	0.08	0.08
tblVehicleEF	MDV	0.90	0.14
tblVehicleEF	MDV	0.67	0.64
tblVehicleEF	MDV	5.5910e-003	5.4000e-003
tblVehicleEF	MDV	1.4040e-003	1.3000e-003
tblVehicleEF	MDV	0.06	0.06
tblVehicleEF	MDV	0.24	0.19
tblVehicleEF	MDV	0.05	0.05
tblVehicleEF	MDV	0.11	0.12
tblVehicleEF	MDV	0.90	0.14
tblVehicleEF	MDV	0.72	0.69
tblVehicleEF	MH	0.00	0.04
tblVehicleEF	MH	0.00	0.04
tblVehicleEF	MH	4.83	7.96
tblVehicleEF	MH	10.13	14.05
tblVehicleEF	MH	749.06	765.34
tblVehicleEF	MH	30.29	32.30
tblVehicleEF	MH	4.6800e-003	5.7690e-003
tblVehicleEF	MH	2.05	1.78
tblVehicleEF	MH	0.89	1.14
tblVehicleEF	MH	0.05	0.01
tblVehicleEF	MH	8.6990e-003	0.01
tblVehicleEF	MH	0.04	0.01

tblVehicleEF	MH	1.5180e-003	8.0000e-004
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	2.1750e-003	0.01
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	1.3330e-003	8.0000e-004
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tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.38	0.47
tblVehicleEF	MH	0.19	0.29
tblVehicleEF	MH	2.20	0.02
tblVehicleEF	MH	0.58	0.80
tblVehicleEF	MH	7.7360e-003	7.6000e-003
tblVehicleEF	MH	4.9100e-004	6.0000e-004
tblVehicleEF	MH	0.98	1.25
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.38	0.47
tblVehicleEF	MH	0.23	0.33
tblVehicleEF	MH	2.20	0.02
tblVehicleEF	MH	0.62	0.86
tblVehicleEF	MH	0.00	0.04
tblVehicleEF	MH	0.00	0.03
tblVehicleEF	MH	4.88	8.11
tblVehicleEF	MH	7.34	9.74
tblVehicleEF	MH	749.05	765.34
tblVehicleEF	MH	30.29	32.30
tblVehicleEF	MH	4.6800e-003	5.7690e-003
tblVehicleEF	MH	1.93	1.78
tblVehicleEF	MH	0.84	1.07

tblVehicleEF	MH	0.05	0.01
tblVehicleEF	MH	8.6990e-003	0.01
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	1.5180e-003	8.0000e-004
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	2.1750e-003	0.01
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	1.3330e-003	8.0000e-004
tblVehicleEF	MH	1.74	2.35
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.62	0.93
tblVehicleEF	MH	0.19	0.30
tblVehicleEF	MH	2.12	0.02
tblVehicleEF	MH	0.46	0.61
tblVehicleEF	MH	7.7360e-003	7.6000e-003
tblVehicleEF	MH	4.4300e-004	5.0000e-004
tblVehicleEF	MH	1.74	2.35
tblVehicleEF	MH	0.08	0.09
tblVehicleEF	MH	0.62	0.93
tblVehicleEF	MH	0.23	0.34
tblVehicleEF	MH	2.12	0.02
tblVehicleEF	MH	0.49	0.65
tblVehicleEF	MH	0.00	0.04
tblVehicleEF	MH	0.00	0.04
tblVehicleEF	MH	4.83	7.94
tblVehicleEF	MH	11.74	14.25
tblVehicleEF	MH	749.05	765.34
tblVehicleEF	MH	30.29	32.30

tblVehicleEF	MH	4.6800e-003	5.7690e-003
tblVehicleEF	MH	2.04	1.89
tblVehicleEF	MH	0.92	1.14
tblVehicleEF	MH	0.05	0.01
tblVehicleEF	MH	8.6990e-003	0.01
tblVehicleEF	MH	0.04	0.01
tblVehicleEF	MH	1.5180e-003	8.0000e-004
tblVehicleEF	MH	0.02	0.01
tblVehicleEF	MH	2.1750e-003	0.01
tblVehicleEF	MH	0.03	0.01
tblVehicleEF	MH	1.3330e-003	8.0000e-004
tblVehicleEF	MH	0.74	1.42
tblVehicleEF	MH	0.11	0.13
tblVehicleEF	MH	0.31	0.62
tblVehicleEF	MH	0.19	0.29
tblVehicleEF	MH	2.34	0.02
tblVehicleEF	MH	0.65	0.81
tblVehicleEF	MH	7.7360e-003	7.6000e-003
tblVehicleEF	MH	5.1800e-004	6.0000e-004
tblVehicleEF	MH	0.74	1.42
tblVehicleEF	MH	0.11	0.13
tblVehicleEF	MH	0.31	0.62
tblVehicleEF	MH	0.23	0.33
tblVehicleEF	MH	2.34	0.02
tblVehicleEF	MH	0.70	0.87
tblVehicleEF	MHD	8.1280e-003	9.0000e-004
tblVehicleEF	MHD	8.6090e-003	0.01
tblVehicleEF	MHD	0.00	0.03

tblVehicleEF	MHD	1.88	0.14
tblVehicleEF	MHD	1.33	2.83
tblVehicleEF	MHD	25.00	8.38
tblVehicleEF	MHD	603.24	599.64
tblVehicleEF	MHD	1,078.06	1,105.07
tblVehicleEF	MHD	60.03	66.47
tblVehicleEF	MHD	0.02	0.01
tblVehicleEF	MHD	6.58	0.17
tblVehicleEF	MHD	3.99	4.92
tblVehicleEF	MHD	2.04	0.70
tblVehicleEF	MHD	0.03	2.3000e-003
tblVehicleEF	MHD	0.12	0.01
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.10	0.16
tblVehicleEF	MHD	4.5390e-003	1.3000e-003
tblVehicleEF	MHD	0.03	2.3000e-003
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	2.8530e-003	0.01
tblVehicleEF	MHD	0.09	0.16
tblVehicleEF	MHD	3.8250e-003	1.3000e-003
tblVehicleEF	MHD	3.3460e-003	1.0000e-003
tblVehicleEF	MHD	0.17	0.02
tblVehicleEF	MHD	0.17	0.02
tblVehicleEF	MHD	1.7640e-003	4.0000e-004
tblVehicleEF	MHD	0.22	0.21
tblVehicleEF	MHD	0.72	0.19
tblVehicleEF	MHD	1.65	0.63
tblVehicleEF	MHD	5.9640e-003	1.0000e-004

tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	1.0660e-003	3.0000e-004
tblVehicleEF	MHD	3.3460e-003	1.0000e-003
tblVehicleEF	MHD	0.17	0.02
tblVehicleEF	MHD	0.20	0.02
tblVehicleEF	MHD	1.7640e-003	4.0000e-004
tblVehicleEF	MHD	0.25	0.24
tblVehicleEF	MHD	0.72	0.19
tblVehicleEF	MHD	1.77	0.68
tblVehicleEF	MHD	7.6600e-003	9.0000e-004
tblVehicleEF	MHD	8.6090e-003	0.01
tblVehicleEF	MHD	0.00	0.03
tblVehicleEF	MHD	1.36	0.14
tblVehicleEF	MHD	1.33	2.83
tblVehicleEF	MHD	18.92	6.33
tblVehicleEF	MHD	639.07	635.27
tblVehicleEF	MHD	1,078.06	1,105.07
tblVehicleEF	MHD	60.03	66.47
tblVehicleEF	MHD	0.02	0.01
tblVehicleEF	MHD	6.79	0.17
tblVehicleEF	MHD	3.84	5.00
tblVehicleEF	MHD	1.93	0.66
tblVehicleEF	MHD	0.03	2.3000e-003
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tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.10	0.16
tblVehicleEF	MHD	4.5390e-003	1.3000e-003
tblVehicleEF	MHD	0.02	2.3000e-003

tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	2.8530e-003	0.01
tblVehicleEF	MHD	0.09	0.16
tblVehicleEF	MHD	3.8250e-003	1.3000e-003
tblVehicleEF	MHD	6.2420e-003	1.9000e-003
tblVehicleEF	MHD	0.18	0.02
tblVehicleEF	MHD	0.16	0.02
tblVehicleEF	MHD	3.2020e-003	8.0000e-004
tblVehicleEF	MHD	0.22	0.21
tblVehicleEF	MHD	0.69	0.19
tblVehicleEF	MHD	1.33	0.49
tblVehicleEF	MHD	6.3180e-003	1.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	9.6000e-004	3.0000e-004
tblVehicleEF	MHD	6.2420e-003	1.9000e-003
tblVehicleEF	MHD	0.18	0.02
tblVehicleEF	MHD	0.19	0.02
tblVehicleEF	MHD	3.2020e-003	8.0000e-004
tblVehicleEF	MHD	0.25	0.24
tblVehicleEF	MHD	0.69	0.19
tblVehicleEF	MHD	1.43	0.53
tblVehicleEF	MHD	8.7750e-003	9.0000e-004
tblVehicleEF	MHD	8.6090e-003	0.01
tblVehicleEF	MHD	0.00	0.04
tblVehicleEF	MHD	2.58	0.14
tblVehicleEF	MHD	1.33	2.83
tblVehicleEF	MHD	28.52	8.49
tblVehicleEF	MHD	553.74	550.44

tblVehicleEF	MHD	1,078.06	1,105.07
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tblVehicleEF	MHD	0.02	0.01
tblVehicleEF	MHD	6.28	0.17
tblVehicleEF	MHD	3.95	5.13
tblVehicleEF	MHD	2.11	0.70
tblVehicleEF	MHD	0.04	2.3000e-003
tblVehicleEF	MHD	0.12	0.01
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.10	0.16
tblVehicleEF	MHD	4.5390e-003	1.3000e-003
tblVehicleEF	MHD	0.03	2.3000e-003
tblVehicleEF	MHD	0.05	0.01
tblVehicleEF	MHD	2.8530e-003	0.01
tblVehicleEF	MHD	0.09	0.16
tblVehicleEF	MHD	3.8250e-003	1.3000e-003
tblVehicleEF	MHD	2.3550e-003	1.1000e-003
tblVehicleEF	MHD	0.21	0.03
tblVehicleEF	MHD	0.19	0.02
tblVehicleEF	MHD	1.3640e-003	5.0000e-004
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tblVehicleEF	MHD	1.84	0.64
tblVehicleEF	MHD	5.4750e-003	1.0000e-004
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	1.1270e-003	3.0000e-004
tblVehicleEF	MHD	2.3550e-003	1.1000e-003
tblVehicleEF	MHD	0.21	0.03

tblVehicleEF	MHD	0.22	0.02
tblVehicleEF	MHD	1.3640e-003	5.0000e-004
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tblVehicleEF	OBUS	2.00	4.39
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tblVehicleEF	OBUS	571.35	573.90
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tblVehicleEF	OBUS	4.02	4.02
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tblVehicleEF	OBUS	0.09	0.01
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	9.3700e-004	2.5000e-003
tblVehicleEF	OBUS	0.02	1.4000e-003
tblVehicleEF	OBUS	0.04	0.01
tblVehicleEF	OBUS	2.5410e-003	0.01
tblVehicleEF	OBUS	0.04	0.11
tblVehicleEF	OBUS	8.4800e-004	2.5000e-003

tblVehicleEF	OBUS	7.2000e-004	8.0000e-004
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.41	0.02
tblVehicleEF	OBUS	3.5900e-004	4.0000e-004
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tblVehicleEF	OBUS	5.6490e-003	1.0000e-004
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tblVehicleEF	OBUS	6.0700e-004	5.0000e-004
tblVehicleEF	OBUS	7.2000e-004	8.0000e-004
tblVehicleEF	OBUS	0.03	0.02
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tblVehicleEF	OBUS	3.5900e-004	4.0000e-004
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tblVehicleEF	OBUS	0.27	0.25
tblVehicleEF	OBUS	0.84	0.92
tblVehicleEF	OBUS	0.02	1.2000e-003
tblVehicleEF	OBUS	2.9060e-003	0.03
tblVehicleEF	OBUS	0.00	0.04
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tblVehicleEF	OBUS	10.18	10.64
tblVehicleEF	OBUS	605.30	607.99
tblVehicleEF	OBUS	1,072.43	1,087.06
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tblVehicleEF	OBUS	2.3300e-003	1.2000e-003
tblVehicleEF	OBUS	6.13	0.11

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tblVehicleEF	OBUS	0.02	1.4000e-003
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tblVehicleEF	OBUS	0.01	0.01
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tblVehicleEF	OBUS	9.3700e-004	2.5000e-003
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tblVehicleEF	OBUS	0.04	0.01
tblVehicleEF	OBUS	2.5410e-003	0.01
tblVehicleEF	OBUS	0.04	0.11
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tblVehicleEF	OBUS	0.39	0.02
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tblVehicleEF	OBUS	0.66	0.70
tblVehicleEF	OBUS	5.9840e-003	1.0000e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	5.4800e-004	4.0000e-004
tblVehicleEF	OBUS	1.2640e-003	1.6000e-003
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tblVehicleEF	OBUS	0.44	0.03
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tblVehicleEF	OBUS	0.26	0.25

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tblVehicleEF	OBUS	1,072.43	1,087.06
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tblVehicleEF	OBUS	8.4800e-004	2.5000e-003
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tblVehicleEF	UBUS	2,084.88	2,140.27
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tblVehicleEF	UBUS	0.28	0.01
tblVehicleEF	UBUS	2.0000e-003	9.6000e-003
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tblVehicleEF	UBUS	0.00	0.05
tblVehicleEF	UBUS	3.41	4.09
tblVehicleEF	UBUS	5.65	10.91

tblVehicleEF	UBUS	2,084.88	2,140.27
tblVehicleEF	UBUS	31.79	32.45
tblVehicleEF	UBUS	1.4010e-003	1.1900e-003
tblVehicleEF	UBUS	10.90	9.37
tblVehicleEF	UBUS	0.87	1.76
tblVehicleEF	UBUS	0.66	0.01
tblVehicleEF	UBUS	8.0000e-003	9.6000e-003
tblVehicleEF	UBUS	0.21	0.15
tblVehicleEF	UBUS	3.8100e-004	4.8000e-003
tblVehicleEF	UBUS	0.28	0.01
tblVehicleEF	UBUS	2.0000e-003	9.6000e-003
tblVehicleEF	UBUS	0.19	0.15
tblVehicleEF	UBUS	3.5400e-004	4.8000e-003
tblVehicleEF	UBUS	4.5220e-003	7.8000e-003
tblVehicleEF	UBUS	0.06	0.10
tblVehicleEF	UBUS	2.6270e-003	5.0000e-003
tblVehicleEF	UBUS	0.66	0.77
tblVehicleEF	UBUS	0.42	0.02
tblVehicleEF	UBUS	0.53	1.01
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	4.3400e-004	8.0000e-004
tblVehicleEF	UBUS	4.5220e-003	7.8000e-003
tblVehicleEF	UBUS	0.06	0.10
tblVehicleEF	UBUS	2.6270e-003	5.0000e-003
tblVehicleEF	UBUS	0.73	0.86
tblVehicleEF	UBUS	0.42	0.02
tblVehicleEF	UBUS	0.57	1.08
tblVehicleEF	UBUS	0.00	0.04

tblVehicleEF	UBUS	0.00	0.06
tblVehicleEF	UBUS	3.34	3.99
tblVehicleEF	UBUS	8.01	14.28
tblVehicleEF	UBUS	2,084.88	2,140.27
tblVehicleEF	UBUS	31.79	32.45
tblVehicleEF	UBUS	1.4010e-003	1.1900e-003
tblVehicleEF	UBUS	11.18	9.60
tblVehicleEF	UBUS	0.95	1.88
tblVehicleEF	UBUS	0.66	0.01
tblVehicleEF	UBUS	8.0000e-003	9.6000e-003
tblVehicleEF	UBUS	0.21	0.15
tblVehicleEF	UBUS	3.8100e-004	4.8000e-003
tblVehicleEF	UBUS	0.28	0.01
tblVehicleEF	UBUS	2.0000e-003	9.6000e-003
tblVehicleEF	UBUS	0.19	0.15
tblVehicleEF	UBUS	3.5400e-004	4.8000e-003
tblVehicleEF	UBUS	2.1300e-003	4.9000e-003
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	1.3100e-003	3.2000e-003
tblVehicleEF	UBUS	0.64	0.75
tblVehicleEF	UBUS	0.56	0.03
tblVehicleEF	UBUS	0.66	1.18
tblVehicleEF	UBUS	0.02	0.01
tblVehicleEF	UBUS	4.7500e-004	8.0000e-004
tblVehicleEF	UBUS	2.1300e-003	4.9000e-003
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	1.3100e-003	3.2000e-003
tblVehicleEF	UBUS	0.72	0.83

tblVehicleEF	UBUS	0.56	0.03
tblVehicleEF	UBUS	0.70	1.26
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.6767	7.7808	4.7994	7.0300e-003	0.6421	0.3296	0.9716	0.3253	0.3032	0.6285			670.7934	0.1787	0.0000	674.5470
2015	1.1329	2.7774	1.6884	3.1300e-003	0.0715	0.1307	0.2021	0.0284	0.1212	0.1496			289.2896	0.0631	0.0000	290.6136
Total	**1.8096**	**10.5582**	**6.4878**	**0.0102**	**0.7135**	**0.4603**	**1.1738**	**0.3537**	**0.4244**	**0.7781**			**960.0830**	**0.2418**	**0.0000**	**965.1606**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.3483	3.7701	3.2765	7.0300e-003	0.2767	0.1326	0.4092	0.1338	0.1220	0.2559			670.7927	0.1787	0.0000	674.5463
2015	1.0790	2.1654	1.6365	3.1300e-003	0.0513	0.0925	0.1437	0.0173	0.0861	0.1034			289.2893	0.0631	0.0000	290.6134
Total	**1.4273**	**5.9356**	**4.9130**	**0.0102**	**0.3279**	**0.2251**	**0.5530**	**0.1511**	**0.2081**	**0.3592**			**960.0820**	**0.2418**	**0.0000**	**965.1596**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**21.12**	**43.78**	**24.27**	**0.00**	**54.04**	**51.10**	**52.89**	**57.27**	**50.97**	**53.84**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3107	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			9.0000e-005	0.0000	0.0000	9.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Offroad	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	**0.3107**	**0.0000**	**5.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**9.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3107	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			9.0000e-005	0.0000	0.0000	9.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Offroad	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	**0.3107**	**0.0000**	**5.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**9.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/31/2014	8/30/2014	5	22	Removal of existing rail track, equipment, piping and buldings, if applicable
2	Soil Transport	Site Preparation	9/1/2014	12/31/2014	5	88	Movement of soils onsite
3	Grading	Grading	9/1/2014	12/31/2014	5	88	Grading of spur area
4	Site Preparation - Rail line	Site Preparation	12/17/2014	1/15/2015	5	22	Preparation of the spur area for equipment construction
5	Site Preparation - Pipe line	Site Preparation	1/1/2015	4/2/2015	5	66	Preparation of the pipeline route area for equipment construction
6	Construction - Unloading area	Building Construction	1/1/2015	4/2/2015	5	66	Construction of the unloading equipment and buildings
7	Construction - Paving	Paving	1/1/2015	1/15/2015	5	11	Paving of the roadways and unloading area
8	Commissioning	Architectural Coating	5/1/2015	7/1/2015	5	44	Startup of facilities

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 47

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 111,078; Non-Residential Outdoor: 37,026 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Off-Highway Trucks	3	4.00	381	0.38
Demolition	Rubber Tired Dozers	1	4.00	358	0.40
Demolition	Rubber Tired Dozers	3	8.00	358	0.40
Demolition	Tractors/Loaders/Backhoes	1	4.00	75	0.37
Demolition	Tractors/Loaders/Backhoes	4	8.00	75	0.37
Soil Transport	Off-Highway Trucks	6	4.00	381	0.38
Soil Transport	Rubber Tired Dozers	2	4.00	358	0.40
Grading	Excavators	1	4.00	157	0.38

Grading	Graders	2	4.00	162	0.41
Grading	Off-Highway Trucks	5	4.00	381	0.38
Grading	Rubber Tired Dozers	2	4.00	358	0.40
Grading	Scrapers	2	4.00	356	0.48
Site Preparation - Rail line	Bore/Drill Rigs	1	2.00	82	0.42
Site Preparation - Rail line	Off-Highway Trucks	6	4.00	381	0.38
Site Preparation - Rail line	Plate Compactors	1	2.00	8	0.42
Site Preparation - Rail line	Rubber Tired Dozers	1	4.00	358	0.40
Site Preparation - Rail line	Tractors/Loaders/Backhoes	1	4.00	75	0.37
Site Preparation - Pipe line	Air Compressors	0	6.00	78	0.42
Site Preparation - Pipe line	Cranes	1	2.00	208	0.29
Site Preparation - Pipe line	Off-Highway Trucks	4	4.00	381	0.38
Site Preparation - Pipe line	Plate Compactors	1	2.00	8	0.42
Site Preparation - Pipe line	Tractors/Loaders/Backhoes	1	4.00	75	0.37
Construction - Unloading area	Cranes	1	7.00	208	0.29
Construction - Unloading area	Forklifts	3	8.00	149	0.40
Construction - Unloading area	Generator Sets	1	8.00	84	0.42
Construction - Unloading area	Tractors/Loaders/Backhoes	3	7.00	75	0.37
Construction - Unloading area	Welders	1	8.00	46	0.42
Construction - Paving	Pavers	2	5.00	89	0.42
Construction - Paving	Rollers	2	5.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	12	30.00	0.00	226.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Soil Transport	8	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	12	30.00	0.00	332.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Rail line	10	23.00	0.00	1,706.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation - Pipe line	7	23.00	0.00	426.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Construction - Unloading area	9	31.00	0.00	426.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Construction - Paving	4	0.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Commissioning				0.00	13.00	5.00				

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0110	0.0000	0.0110	1.6700e-003	0.0000	1.6700e-003			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0995	1.1162	0.7796	8.1000e-004		0.0547	0.0547		0.0503	0.0503			77.6930	0.0230	0.0000	78.1751
Total	**0.0995**	**1.1162**	**0.7796**	**8.1000e-004**	**0.0110**	**0.0547**	**0.0658**	**1.6700e-003**	**0.0503**	**0.0520**			**77.6930**	**0.0230**	**0.0000**	**78.1751**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.4400e-003	0.0489	0.0330	9.0000e-005	1.9200e-003	8.6000e-004	2.7800e-003	5.3000e-004	7.9000e-004	1.3200e-003			7.9652	8.0000e-005	0.0000	7.9668
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	2.0800e-003	3.1100e-003	0.0285	4.0000e-005	3.1800e-003	3.0000e-005	3.2100e-003	8.4000e-004	3.0000e-005	8.7000e-004			2.9102	2.1000e-004	0.0000	2.9145
Total	**5.5200e-003**	**0.0520**	**0.0615**	**1.3000e-004**	**5.1000e-003**	**8.9000e-004**	**5.9900e-003**	**1.3700e-003**	**8.2000e-004**	**2.1900e-003**			**10.8754**	**2.9000e-004**	**0.0000**	**10.8814**

3.2 Demolition - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.3100e-003	0.0000	4.3100e-003	6.5000e-004	0.0000	6.5000e-004			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0239	0.2290	0.3910	8.1000e-004		7.7100e-003	7.7100e-003		7.1000e-003	7.1000e-003			77.6929	0.0230	0.0000	78.1750
Total	**0.0239**	**0.2290**	**0.3910**	**8.1000e-004**	**4.3100e-003**	**7.7100e-003**	**0.0120**	**6.5000e-004**	**7.1000e-003**	**7.7500e-003**			**77.6929**	**0.0230**	**0.0000**	**78.1750**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.4400e-003	0.0489	0.0330	9.0000e-005	1.9200e-003	8.6000e-004	2.7800e-003	5.3000e-004	7.9000e-004	1.3200e-003			7.9652	8.0000e-005	0.0000	7.9668
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	2.0800e-003	3.1100e-003	0.0285	4.0000e-005	3.1800e-003	3.0000e-005	3.2100e-003	8.4000e-004	3.0000e-005	8.7000e-004			2.9102	2.1000e-004	0.0000	2.9145
Total	**5.5200e-003**	**0.0520**	**0.0615**	**1.3000e-004**	**5.1000e-003**	**8.9000e-004**	**5.9900e-003**	**1.3700e-003**	**8.2000e-004**	**2.1900e-003**			**10.8754**	**2.9000e-004**	**0.0000**	**10.8814**

3.3 Soil Transport - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2650	0.0000	0.2650	0.1457	0.0000	0.1457			0.0000	0.0000	0.0000	0.0000
Off-Road	0.2112	2.4749	1.3845	2.2100e-003		0.1023	0.1023		0.0941	0.0941			212.2205	0.0627	0.0000	213.5375
Total	**0.2112**	**2.4749**	**1.3845**	**2.2100e-003**	**0.2650**	**0.1023**	**0.3672**	**0.1457**	**0.0941**	**0.2397**			**212.2205**	**0.0627**	**0.0000**	**213.5375**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	5.5300e-003	8.2800e-003	0.0759	1.0000e-004	8.4700e-003	8.0000e-005	8.5500e-003	2.2500e-003	7.0000e-005	2.3300e-003			7.7605	5.5000e-004	0.0000	7.7721
Total	**5.5300e-003**	**8.2800e-003**	**0.0759**	**1.0000e-004**	**8.4700e-003**	**8.0000e-005**	**8.5500e-003**	**2.2500e-003**	**7.0000e-005**	**2.3300e-003**			**7.7605**	**5.5000e-004**	**0.0000**	**7.7721**

3.3 Soil Transport - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1033	0.0000	0.1033	0.0568	0.0000	0.0568			0.0000	0.0000	0.0000	0.0000
Off-Road	0.1393	1.6083	0.9439	2.2100e-003		0.0607	0.0607		0.0558	0.0558			212.2203	0.0627	0.0000	213.5373
Total	**0.1393**	**1.6083**	**0.9439**	**2.2100e-003**	**0.1033**	**0.0607**	**0.1640**	**0.0568**	**0.0558**	**0.1126**			**212.2203**	**0.0627**	**0.0000**	**213.5373**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	5.5300e-003	8.2800e-003	0.0759	1.0000e-004	8.4700e-003	8.0000e-005	8.5500e-003	2.2500e-003	7.0000e-005	2.3300e-003			7.7605	5.5000e-004	0.0000	7.7721
Total	**5.5300e-003**	**8.2800e-003**	**0.0759**	**1.0000e-004**	**8.4700e-003**	**8.0000e-005**	**8.5500e-003**	**2.2500e-003**	**7.0000e-005**	**2.3300e-003**			**7.7605**	**5.5000e-004**	**0.0000**	**7.7721**

3.4 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2899	0.0000	0.2899	0.1483	0.0000	0.1483			0.0000	0.0000	0.0000	0.0000
Off-Road	0.3053	3.5945	2.0616	2.9400e-003		0.1560	0.1560		0.1435	0.1435			283.4409	0.0838	0.0000	285.1999
Total	**0.3053**	**3.5945**	**2.0616**	**2.9400e-003**	**0.2899**	**0.1560**	**0.4459**	**0.1483**	**0.1435**	**0.2919**			**283.4409**	**0.0838**	**0.0000**	**285.1999**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0500e-003	0.0719	0.0485	1.3000e-004	2.8200e-003	1.2600e-003	4.0800e-003	7.7000e-004	1.1600e-003	1.9400e-003			11.7011	1.1000e-004	0.0000	11.7035
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-003	0.0124	0.1139	1.4000e-004	0.0127	1.2000e-004	0.0128	3.3800e-003	1.1000e-004	3.4900e-003			11.6408	8.3000e-004	0.0000	11.6582
Total	**0.0134**	**0.0843**	**0.1624**	**2.7000e-004**	**0.0155**	**1.3800e-003**	**0.0169**	**4.1500e-003**	**1.2700e-003**	**5.4300e-003**			**23.3419**	**9.4000e-004**	**0.0000**	**23.3617**

3.4 Grading - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1131	0.0000	0.1131	0.0579	0.0000	0.0579			0.0000	0.0000	0.0000	0.0000
Off-Road	0.1296	1.3989	1.3955	2.9400e-003		0.0508	0.0508		0.0468	0.0468			283.4406	0.0838	0.0000	285.1995
Total	**0.1296**	**1.3989**	**1.3955**	**2.9400e-003**	**0.1131**	**0.0508**	**0.1639**	**0.0579**	**0.0468**	**0.1046**			**283.4406**	**0.0838**	**0.0000**	**285.1995**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0500e-003	0.0719	0.0485	1.3000e-004	2.8200e-003	1.2600e-003	4.0800e-003	7.7000e-004	1.1600e-003	1.9400e-003			11.7011	1.1000e-004	0.0000	11.7035
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	8.3000e-003	0.0124	0.1139	1.4000e-004	0.0127	1.2000e-004	0.0128	3.3800e-003	1.1000e-004	3.4900e-003			11.6408	8.3000e-004	0.0000	11.6582
Total	**0.0134**	**0.0843**	**0.1624**	**2.7000e-004**	**0.0155**	**1.3800e-003**	**0.0169**	**4.1500e-003**	**1.2700e-003**	**5.4300e-003**			**23.3419**	**9.4000e-004**	**0.0000**	**23.3617**

3.5 Site Preparation - Rail line - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0331	0.0000	0.0331	0.0182	0.0000	0.0182			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0226	0.2647	0.1385	2.5000e-004		0.0110	0.0110		0.0101	0.0101			24.2822	7.1700e-003	0.0000	24.4327
Total	**0.0226**	**0.2647**	**0.1385**	**2.5000e-004**	**0.0331**	**0.0110**	**0.0441**	**0.0182**	**0.0101**	**0.0283**			**24.2822**	**7.1700e-003**	**0.0000**	**24.4327**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0130	0.1847	0.1246	3.2000e-004	0.0127	3.2500e-003	0.0160	3.3300e-003	2.9900e-003	6.3200e-003			30.0635	2.9000e-004	0.0000	30.0695
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-004	1.1900e-003	0.0109	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.2000e-004	1.0000e-005	3.3000e-004			1.1156	8.0000e-005	0.0000	1.1172
Total	**0.0138**	**0.1859**	**0.1355**	**3.3000e-004**	**0.0139**	**3.2600e-003**	**0.0172**	**3.6500e-003**	**3.0000e-003**	**6.6500e-003**			**31.1790**	**3.7000e-004**	**0.0000**	**31.1867**

3.5 Site Preparation - Rail line - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0129	0.0000	0.0129	7.1000e-003	0.0000	7.1000e-003			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0174	0.2034	0.1108	2.5000e-004		7.8000e-003	7.8000e-003		7.1700e-003	7.1700e-003			24.2822	7.1700e-003	0.0000	24.4327
Total	**0.0174**	**0.2034**	**0.1108**	**2.5000e-004**	**0.0129**	**7.8000e-003**	**0.0207**	**7.1000e-003**	**7.1700e-003**	**0.0143**			**24.2822**	**7.1700e-003**	**0.0000**	**24.4327**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0130	0.1847	0.1246	3.2000e-004	0.0127	3.2500e-003	0.0160	3.3300e-003	2.9900e-003	6.3200e-003			30.0635	2.9000e-004	0.0000	30.0695
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-004	1.1900e-003	0.0109	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.2000e-004	1.0000e-005	3.3000e-004			1.1156	8.0000e-005	0.0000	1.1172
Total	**0.0138**	**0.1859**	**0.1355**	**3.3000e-004**	**0.0139**	**3.2600e-003**	**0.0172**	**3.6500e-003**	**3.0000e-003**	**6.6500e-003**			**31.1790**	**3.7000e-004**	**0.0000**	**31.1867**

3.5 Site Preparation - Rail line - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0331	0.0000	0.0331	0.0182	0.0000	0.0182			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0222	0.2573	0.1364	2.5000e-004		0.0107	0.0107		9.8100e-003	9.8100e-003			24.0378	7.1700e-003	0.0000	24.1883
Total	**0.0222**	**0.2573**	**0.1364**	**2.5000e-004**	**0.0331**	**0.0107**	**0.0438**	**0.0182**	**9.8100e-003**	**0.0280**			**24.0378**	**7.1700e-003**	**0.0000**	**24.1883**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0119	0.1600	0.1180	3.2000e-004	0.0127	2.3900e-003	0.0151	3.3300e-003	2.2000e-003	5.5300e-003			29.6947	2.5000e-004	0.0000	29.6999
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	6.8000e-004	1.0400e-003	9.3600e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.2000e-004	1.0000e-005	3.3000e-004			1.0771	7.0000e-005	0.0000	1.0786
Total	**0.0126**	**0.1611**	**0.1273**	**3.3000e-004**	**0.0139**	**2.4000e-003**	**0.0163**	**3.6500e-003**	**2.2100e-003**	**5.8600e-003**			**30.7718**	**3.2000e-004**	**0.0000**	**30.7785**

3.5 Site Preparation - Rail line - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0129	0.0000	0.0129	7.1000e-003	0.0000	7.1000e-003			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0170	0.1966	0.1091	2.5000e-004		7.5100e-003	7.5100e-003		6.9100e-003	6.9100e-003			24.0377	7.1700e-003	0.0000	24.1883
Total	**0.0170**	**0.1966**	**0.1091**	**2.5000e-004**	**0.0129**	**7.5100e-003**	**0.0204**	**7.1000e-003**	**6.9100e-003**	**0.0140**			**24.0377**	**7.1700e-003**	**0.0000**	**24.1883**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0119	0.1600	0.1180	3.2000e-004	0.0127	2.3900e-003	0.0151	3.3300e-003	2.2000e-003	5.5300e-003			29.6947	2.5000e-004	0.0000	29.6999
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	6.8000e-004	1.0400e-003	9.3600e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2300e-003	3.2000e-004	1.0000e-005	3.3000e-004			1.0771	7.0000e-005	0.0000	1.0786
Total	**0.0126**	**0.1611**	**0.1273**	**3.3000e-004**	**0.0139**	**2.4000e-003**	**0.0163**	**3.6500e-003**	**2.2100e-003**	**5.8600e-003**			**30.7718**	**3.2000e-004**	**0.0000**	**30.7785**

3.6 Site Preparation - Pipe line - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0754	0.8758	0.3992	9.1000e-004		0.0357	0.0357		0.0329	0.0329			86.9884	0.0259	0.0000	87.5327
Total	**0.0754**	**0.8758**	**0.3992**	**9.1000e-004**	**0.0000**	**0.0357**	**0.0357**	**0.0000**	**0.0329**	**0.0329**			**86.9884**	**0.0259**	**0.0000**	**87.5327**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9600e-003	0.0799	0.0589	1.6000e-004	3.6200e-003	1.1900e-003	4.8100e-003	9.9000e-004	1.1000e-003	2.0900e-003			14.8299	1.2000e-004	0.0000	14.8325
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	4.0600e-003	6.2100e-003	0.0561	8.0000e-005	7.3100e-003	6.0000e-005	7.3700e-003	1.9400e-003	6.0000e-005	2.0000e-003			6.4627	4.2000e-004	0.0000	6.4715
Total	**0.0100**	**0.0861**	**0.1150**	**2.4000e-004**	**0.0109**	**1.2500e-003**	**0.0122**	**2.9300e-003**	**1.1600e-003**	**4.0900e-003**			**21.2926**	**5.4000e-004**	**0.0000**	**21.3041**

3.6 Site Preparation - Pipe line - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0661	0.7695	0.3941	9.1000e-004		0.0293	0.0293		0.0269	0.0269			86.9883	0.0259	0.0000	87.5326
Total	**0.0661**	**0.7695**	**0.3941**	**9.1000e-004**	**0.0000**	**0.0293**	**0.0293**	**0.0000**	**0.0269**	**0.0269**			**86.9883**	**0.0259**	**0.0000**	**87.5326**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9600e-003	0.0799	0.0589	1.6000e-004	3.6200e-003	1.1900e-003	4.8100e-003	9.9000e-004	1.1000e-003	2.0900e-003			14.8299	1.2000e-004	0.0000	14.8325
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	4.0600e-003	6.2100e-003	0.0561	8.0000e-005	7.3100e-003	6.0000e-005	7.3700e-003	1.9400e-003	6.0000e-005	2.0000e-003			6.4627	4.2000e-004	0.0000	6.4715
Total	**0.0100**	**0.0861**	**0.1150**	**2.4000e-004**	**0.0109**	**1.2500e-003**	**0.0122**	**2.9300e-003**	**1.1600e-003**	**4.0900e-003**			**21.2926**	**5.4000e-004**	**0.0000**	**21.3041**

3.7 Construction - Unloading area - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1354	1.2579	0.7446	1.0700e-003		0.0755	0.0755		0.0704	0.0704			98.8469	0.0273	0.0000	99.4195
Total	**0.1354**	**1.2579**	**0.7446**	**1.0700e-003**		**0.0755**	**0.0755**		**0.0704**	**0.0704**			**98.8469**	**0.0273**	**0.0000**	**99.4195**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9600e-003	0.0799	0.0589	1.6000e-004	3.6200e-003	1.1900e-003	4.8100e-003	9.9000e-004	1.1000e-003	2.0900e-003			14.8299	1.2000e-004	0.0000	14.8325
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	5.4700e-003	8.3700e-003	0.0757	1.1000e-004	9.8500e-003	9.0000e-005	9.9400e-003	2.6200e-003	8.0000e-005	2.7000e-003			8.7106	5.7000e-004	0.0000	8.7225
Total	**0.0114**	**0.0883**	**0.1346**	**2.7000e-004**	**0.0135**	**1.2800e-003**	**0.0148**	**3.6100e-003**	**1.1800e-003**	**4.7900e-003**			**23.5405**	**6.9000e-004**	**0.0000**	**23.5550**

3.7 Construction - Unloading area - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0959	0.8129	0.7251	1.0700e-003		0.0469	0.0469		0.0441	0.0441			98.8468	0.0273	0.0000	99.4194
Total	**0.0959**	**0.8129**	**0.7251**	**1.0700e-003**		**0.0469**	**0.0469**		**0.0441**	**0.0441**			**98.8468**	**0.0273**	**0.0000**	**99.4194**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9600e-003	0.0799	0.0589	1.6000e-004	3.6200e-003	1.1900e-003	4.8100e-003	9.9000e-004	1.1000e-003	2.0900e-003			14.8299	1.2000e-004	0.0000	14.8325
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	5.4700e-003	8.3700e-003	0.0757	1.1000e-004	9.8500e-003	9.0000e-005	9.9400e-003	2.6200e-003	8.0000e-005	2.7000e-003			8.7106	5.7000e-004	0.0000	8.7225
Total	**0.0114**	**0.0883**	**0.1346**	**2.7000e-004**	**0.0135**	**1.2800e-003**	**0.0148**	**3.6100e-003**	**1.1800e-003**	**4.7900e-003**			**23.5405**	**6.9000e-004**	**0.0000**	**23.5550**

3.8 Construction - Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.6000e-003	0.0510	0.0312	4.0000e-005		3.9000e-003	3.9000e-003		3.5800e-003	3.5800e-003			3.8116	1.1400e-003	0.0000	3.8355
Paving	2.2300e-003					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	**7.8300e-003**	**0.0510**	**0.0312**	**4.0000e-005**		**3.9000e-003**	**3.9000e-003**		**3.5800e-003**	**3.5800e-003**			**3.8116**	**1.1400e-003**	**0.0000**	**3.8355**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.8 Construction - Paving - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.6000e-003	0.0510	0.0312	4.0000e-005		3.9000e-003	3.9000e-003		3.5800e-003	3.5800e-003			3.8116	1.1400e-003	0.0000	3.8355
Paving	2.2300e-003					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	**7.8300e-003**	**0.0510**	**0.0312**	**4.0000e-005**		**3.9000e-003**	**3.9000e-003**		**3.5800e-003**	**3.5800e-003**			**3.8116**	**1.1400e-003**	**0.0000**	**3.8355**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.9 Commissioning - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8581					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	**0.8581**					**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.9 Commissioning - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8581					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	**0.8581**					**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
User Defined Industrial	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.440203	0.187725	0.202335	0.081928	0.024463	0.012999	0.013453	0.015831	0.001200	0.001190	0.011748	0.001156	0.005769

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3107	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			9.0000e-005	0.0000	0.0000	9.0000e-005
Unmitigated	0.3107	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			9.0000e-005	0.0000	0.0000	9.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0215					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2892					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			9.0000e-005	0.0000	0.0000	9.0000e-005
Total	**0.3107**	**0.0000**	**5.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**9.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0215					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2892					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000			9.0000e-005	0.0000	0.0000	9.0000e-005
Total	**0.3107**	**0.0000**	**5.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**9.0000e-005**	**0.0000**	**0.0000**	**9.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Off-Highway Trucks	0	0.00	0	381	0.38	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Off-Highway Trucks	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

10.0 Vegetation

Coastal Access

San Luis Obispo County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	7.80	Acre	7.80	339,768.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Phillips66 Coastal Access Construction Emissions

Land Use -

Construction Phase - Building construction would be installation of the bridge. Paving would be for the roadway, 2 miles long by 30 feet wide, and parking area

Off-road Equipment - Construction equipment estimated

Off-road Equipment - equipment estimated

Off-road Equipment - equipment estimated

Off-road Equipment -

Grading - Area based on 2 miles by 35 feet plus about 0.5 acres for bridge construction plus 1.0 ares for parking area. Silt content based on AP-42 for sand, 2.6, table 13.2.4-1

Trips and VMT - Worker trips estimated. Haul trips based on asphalt (2" deep) and sub-base volume (6" deep), and on an estimated 20 trips to haul bridge components

Energy Use -

Construction Off-road Equipment Mitigation -

Architectural Coating - Assumed that bridge would come mostly painted, with only touchup and misc painting for an estaimted total of 5,000 ft2

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	169,884.00	5,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	509,652.00	0.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	230.00	20.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	PhaseEndDate	3/25/2014	2/25/2014
tblConstructionPhase	PhaseStartDate	2/26/2014	1/29/2014
tblGrading	AcresOfGrading	5.00	10.00
tblGrading	MaterialSiltContent	6.90	2.60
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	627.00
tblTripsAndVMT	HaulingTripNumber	0.00	161.00
tblTripsAndVMT	HaulingTripNumber	0.00	209.00
tblTripsAndVMT	VendorTripNumber	56.00	2.00
tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	143.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	29.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	6.2534	55.9484	39.1550	0.0662	3.5932	2.2549	5.6399	1.4521	2.1220	3.3349			6,852.5943	0.7957	0.0000	6,869.3030
Total	**6.2534**	**55.9484**	**39.1550**	**0.0662**	**3.5932**	**2.2549**	**5.6399**	**1.4521**	**2.1220**	**3.3349**			**6,852.5943**	**0.7957**	**0.0000**	**6,869.3030**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	6.2534	55.9484	39.1550	0.0662	2.2438	2.2549	4.2905	0.8247	2.1220	2.7076			6,852.5943	0.7957	0.0000	6,869.3030
Total	**6.2534**	**55.9484**	**39.1550**	**0.0662**	**2.2438**	**2.2549**	**4.2905**	**0.8247**	**2.1220**	**2.7076**			**6,852.5943**	**0.7957**	**0.0000**	**6,869.3030**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**37.55**	**0.00**	**23.93**	**43.20**	**0.00**	**18.81**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	9.4284	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			1.7100e-003	1.0000e-005		1.8100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Total	**9.4284**	**1.0000e-005**	**8.3000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**1.7100e-003**	**1.0000e-005**	**0.0000**	**1.8100e-003**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	9.4284	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			1.7100e-003	1.0000e-005		1.8100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Total	**9.4284**	**1.0000e-005**	**8.3000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**1.7100e-003**	**1.0000e-005**	**0.0000**	**1.8100e-003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/15/2014	1/28/2014	5	10	
2	Building Construction	Building Construction	1/29/2014	2/25/2014	5	20	
3	Paving	Paving	1/29/2014	2/25/2014	5	20	
4	Architectural Coating	Architectural Coating	2/26/2014	3/11/2014	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 5,000 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	1	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Paving Equipment	1	8.00	130	0.36
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	3	5.00	0.00	627.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	10.00	2.00	161.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	5.00	0.00	209.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4534	0.0000	2.4534	1.1407	0.0000	1.1407			0.0000			0.0000
Off-Road	2.7064	28.9782	18.4838	0.0183		1.5679	1.5679		1.4425	1.4425			1,939.0742	0.5730		1,951.1075
Total	**2.7064**	**28.9782**	**18.4838**	**0.0183**	**2.4534**	**1.5679**	**4.0213**	**1.1407**	**1.4425**	**2.5831**			**1,939.0742**	**0.5730**		**1,951.1075**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0178	26.9224	20.2298	0.0474	1.0903	0.4783	1.5686	0.2983	0.4400	0.7383			4,865.3014	0.0466		4,866.2797
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0336	0.0478	0.4413	5.4000e-004	0.0494	4.7000e-004	0.0499	0.0131	4.2000e-004	0.0135			48.2187	3.4600e-003		48.2914
Total	**2.0513**	**26.9702**	**20.6712**	**0.0479**	**1.1397**	**0.4788**	**1.6185**	**0.3114**	**0.4404**	**0.7518**			**4,913.5201**	**0.0500**		**4,914.5711**

3.2 Grading - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1041	0.0000	1.1041	0.5133	0.0000	0.5133			0.0000			0.0000
Off-Road	2.7064	28.9782	18.4838	0.0183		1.5679	1.5679		1.4425	1.4425			1,939.0742	0.5730		1,951.1075
Total	**2.7064**	**28.9782**	**18.4838**	**0.0183**	**1.1041**	**1.5679**	**2.6720**	**0.5133**	**1.4425**	**1.9558**			**1,939.0742**	**0.5730**		**1,951.1075**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0178	26.9224	20.2298	0.0474	1.0903	0.4783	1.5686	0.2983	0.4400	0.7383			4,865.3014	0.0466		4,866.2797
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0336	0.0478	0.4413	5.4000e-004	0.0494	4.7000e-004	0.0499	0.0131	4.2000e-004	0.0135			48.2187	3.4600e-003		48.2914
Total	**2.0513**	**26.9702**	**20.6712**	**0.0479**	**1.1397**	**0.4788**	**1.6185**	**0.3114**	**0.4404**	**0.7518**			**4,913.5201**	**0.0500**		**4,914.5711**

3.3 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7242	20.7718	12.1289	0.0183		1.3821	1.3821		1.3191	1.3191			1,805.8100	0.4219		1,814.6700
Total	**2.7242**	**20.7718**	**12.1289**	**0.0183**		**1.3821**	**1.3821**		**1.3191**	**1.3191**			**1,805.8100**	**0.4219**		**1,814.6700**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2591	3.4566	2.5973	6.0900e-003	0.1400	0.0614	0.2014	0.0383	0.0565	0.0948			624.6519	5.9800e-003		624.7775
Vendor	0.0332	0.2131	0.3636	3.4000e-004	9.1100e-003	4.0800e-003	0.0132	2.6000e-003	3.7500e-003	6.3500e-003			34.4546	4.1000e-004		34.4632
Worker	0.0672	0.0956	0.8827	1.0800e-003	0.0989	9.4000e-004	0.0998	0.0262	8.4000e-004	0.0271			96.4375	6.9200e-003		96.5828
Total	**0.3594**	**3.7653**	**3.8436**	**7.5100e-003**	**0.2480**	**0.0664**	**0.3144**	**0.0671**	**0.0611**	**0.1282**			**755.5440**	**0.0133**		**755.8235**

3.3 Building Construction - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7242	20.7718	12.1289	0.0183		1.3821	1.3821		1.3191	1.3191			1,805.8100	0.4219		1,814.6700
Total	**2.7242**	**20.7718**	**12.1289**	**0.0183**		**1.3821**	**1.3821**		**1.3191**	**1.3191**			**1,805.8100**	**0.4219**		**1,814.6700**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2591	3.4566	2.5973	6.0900e-003	0.1400	0.0614	0.2014	0.0383	0.0565	0.0948			624.6519	5.9800e-003		624.7775
Vendor	0.0332	0.2131	0.3636	3.4000e-004	9.1100e-003	4.0800e-003	0.0132	2.6000e-003	3.7500e-003	6.3500e-003			34.4546	4.1000e-004		34.4632
Worker	0.0672	0.0956	0.8827	1.0800e-003	0.0989	9.4000e-004	0.0998	0.0262	8.4000e-004	0.0271			96.4375	6.9200e-003		96.5828
Total	**0.3594**	**3.7653**	**3.8436**	**7.5100e-003**	**0.2480**	**0.0664**	**0.3144**	**0.0671**	**0.0611**	**0.1282**			**755.5440**	**0.0133**		**755.8235**

3.4 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1805	13.0428	7.4825	0.0111		0.7261	0.7261		0.6681	0.6681			1,181.7453	0.3492		1,189.0789
Paving	1.0218					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.2023**	**13.0428**	**7.4825**	**0.0111**		**0.7261**	**0.7261**		**0.6681**	**0.6681**			**1,181.7453**	**0.3492**		**1,189.0789**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3363	4.4871	3.3716	7.9000e-003	0.1817	0.0797	0.2614	0.0497	0.0733	0.1231			810.8836	7.7600e-003		811.0466
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0336	0.0478	0.4413	5.4000e-004	0.0494	4.7000e-004	0.0499	0.0131	4.2000e-004	0.0135			48.2187	3.4600e-003		48.2914
Total	**0.3699**	**4.5349**	**3.8130**	**8.4400e-003**	**0.2312**	**0.0802**	**0.3113**	**0.0628**	**0.0738**	**0.1366**			**859.1023**	**0.0112**		**859.3380**

3.4 Paving - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1805	13.0428	7.4825	0.0111		0.7261	0.7261		0.6681	0.6681			1,181.7453	0.3492		1,189.0789
Paving	1.0218					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.2023**	**13.0428**	**7.4825**	**0.0111**		**0.7261**	**0.7261**		**0.6681**	**0.6681**			**1,181.7453**	**0.3492**		**1,189.0789**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3363	4.4871	3.3716	7.9000e-003	0.1817	0.0797	0.2614	0.0497	0.0733	0.1231			810.8836	7.7600e-003		811.0466
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0336	0.0478	0.4413	5.4000e-004	0.0494	4.7000e-004	0.0499	0.0131	4.2000e-004	0.0135			48.2187	3.4600e-003		48.2914
Total	**0.3699**	**4.5349**	**3.8130**	**8.4400e-003**	**0.2312**	**0.0802**	**0.3113**	**0.0628**	**0.0738**	**0.1366**			**859.1023**	**0.0112**		**859.3380**

3.5 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.7938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4462	2.7773	1.9216	2.9700e-003		0.2452	0.2452		0.2452	0.2452			281.4481	0.0401		282.2905
Total	**6.2400**	**2.7773**	**1.9216**	**2.9700e-003**		**0.2452**	**0.2452**		**0.2452**	**0.2452**			**281.4481**	**0.0401**		**282.2905**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0134	0.0191	0.1765	2.2000e-004	0.0198	1.9000e-004	0.0200	5.2400e-003	1.7000e-004	5.4100e-003			19.2875	1.3800e-003		19.3166
Total	**0.0134**	**0.0191**	**0.1765**	**2.2000e-004**	**0.0198**	**1.9000e-004**	**0.0200**	**5.2400e-003**	**1.7000e-004**	**5.4100e-003**			**19.2875**	**1.3800e-003**		**19.3166**

3.5 Architectural Coating - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	5.7938					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4462	2.7773	1.9216	2.9700e-003		0.2452	0.2452		0.2452	0.2452			281.4481	0.0401		282.2905
Total	**6.2400**	**2.7773**	**1.9216**	**2.9700e-003**		**0.2452**	**0.2452**		**0.2452**	**0.2452**			**281.4481**	**0.0401**		**282.2905**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Worker	0.0134	0.0191	0.1765	2.2000e-004	0.0198	1.9000e-004	0.0200	5.2400e-003	1.7000e-004	5.4100e-003			19.2875	1.3800e-003		19.3166
Total	**0.0134**	**0.0191**	**0.1765**	**2.2000e-004**	**0.0198**	**1.9000e-004**	**0.0200**	**5.2400e-003**	**1.7000e-004**	**5.4100e-003**			**19.2875**	**1.3800e-003**		**19.3166**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.455690	0.042546	0.214770	0.152257	0.068772	0.010100	0.016640	0.021228	0.002325	0.001418	0.008694	0.000867	0.004695

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.4284	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			1.7100e-003	1.0000e-005		1.8100e-003
Unmitigated	9.4284	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			1.7100e-003	1.0000e-005		1.8100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1573					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.2710					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			1.7100e-003	1.0000e-005		1.8100e-003
Total	**9.4284**	**1.0000e-005**	**8.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**1.7100e-003**	**1.0000e-005**		**1.8100e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1573					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.2710					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			1.7100e-003	1.0000e-005		1.8100e-003
Total	**9.4284**	**1.0000e-005**	**8.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**1.7100e-003**	**1.0000e-005**		**1.8100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Coastal Access

San Luis Obispo County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	7.80	Acre	7.80	339,768.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Phillips66 Coastal Access Construction Emissions

Land Use -

Construction Phase - Building construction would be installation of the bridge. Paving would be for the roadway, 2 miles long by 30 feet wide, and parking area

Off-road Equipment - Construction equipment estimated

Off-road Equipment - equipment estimated

Off-road Equipment - equipment estimated

Off-road Equipment -

Grading - Area based on 2 miles by 35 feet plus about 0.5 acres for bridge construction plus 1.0 ares for parking area. Silt content based on AP-42 for sand, 2.6, table 13.2.4-1

Trips and VMT - Worker trips estimated. Haul trips based on asphalt (2" deep) and sub-base volume (6" deep), and on an estimated 20 trips to haul bridge components

Energy Use -

Construction Off-road Equipment Mitigation -

Architectural Coating - Assumed that bridge would come mostly painted, with only touchup and misc painting for an estaimted total of 5,000 ft2

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	169,884.00	5,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	509,652.00	0.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	230.00	20.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	PhaseEndDate	3/25/2014	2/25/2014
tblConstructionPhase	PhaseStartDate	2/26/2014	1/29/2014
tblGrading	AcresOfGrading	5.00	10.00
tblGrading	MaterialSiltContent	6.90	2.60
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	627.00
tblTripsAndVMT	HaulingTripNumber	0.00	161.00
tblTripsAndVMT	HaulingTripNumber	0.00	209.00
tblTripsAndVMT	VendorTripNumber	56.00	2.00
tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	143.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	29.00	2.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.1106	0.7167	0.4630	8.0000e-004	0.0226	0.0340	0.0566	8.5300e-003	0.0319	0.0404			74.2594	0.0102	0.0000	74.4742
Total	**0.1106**	**0.7167**	**0.4630**	**8.0000e-004**	**0.0226**	**0.0340**	**0.0566**	**8.5300e-003**	**0.0319**	**0.0404**			**74.2594**	**0.0102**	**0.0000**	**74.4742**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.1106	0.7167	0.4630	8.0000e-004	0.0159	0.0340	0.0499	5.3900e-003	0.0319	0.0372			74.2593	0.0102	0.0000	74.4742
Total	**0.1106**	**0.7167**	**0.4630**	**8.0000e-004**	**0.0159**	**0.0340**	**0.0499**	**5.3900e-003**	**0.0319**	**0.0372**			**74.2593**	**0.0102**	**0.0000**	**74.4742**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**29.85**	**0.00**	**11.92**	**36.81**	**0.00**	**7.78**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.7207	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.6000e-004	0.0000	0.0000	2.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	**1.7207**	**0.0000**	**1.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**2.6000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.7207	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.6000e-004	0.0000	0.0000	2.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	**1.7207**	**0.0000**	**1.4000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**2.6000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/15/2014	1/28/2014	5	10	
2	Building Construction	Building Construction	1/29/2014	2/25/2014	5	20	
3	Paving	Paving	1/29/2014	2/25/2014	5	20	
4	Architectural Coating	Architectural Coating	2/26/2014	3/11/2014	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 5,000 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	1	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Paving Equipment	1	8.00	130	0.36
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	3	5.00	0.00	627.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	10.00	2.00	161.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	5.00	0.00	209.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0123	0.0000	0.0123	5.7000e-003	0.0000	5.7000e-003			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0135	0.1449	0.0924	9.0000e-005		7.8400e-003	7.8400e-003		7.2100e-003	7.2100e-003			8.7955	2.6000e-003	0.0000	8.8501
Total	**0.0135**	**0.1449**	**0.0924**	**9.0000e-005**	**0.0123**	**7.8400e-003**	**0.0201**	**5.7000e-003**	**7.2100e-003**	**0.0129**			**8.7955**	**2.6000e-003**	**0.0000**	**8.8501**

3.2 Grading - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.5400e-003	0.1358	0.0916	2.4000e-004	5.3300e-003	2.3900e-003	7.7100e-003	1.4600e-003	2.1900e-003	3.6600e-003			22.0982	2.1000e-004	0.0000	22.1026
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	2.4000e-004	2.1600e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005			0.2205	2.0000e-005	0.0000	0.2208
Total	**9.7000e-003**	**0.1360**	**0.0938**	**2.4000e-004**	**5.5700e-003**	**2.3900e-003**	**7.9500e-003**	**1.5200e-003**	**2.1900e-003**	**3.7300e-003**			**22.3187**	**2.3000e-004**	**0.0000**	**22.3234**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.5200e-003	0.0000	5.5200e-003	2.5700e-003	0.0000	2.5700e-003			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0135	0.1449	0.0924	9.0000e-005		7.8400e-003	7.8400e-003		7.2100e-003	7.2100e-003			8.7955	2.6000e-003	0.0000	8.8501
Total	**0.0135**	**0.1449**	**0.0924**	**9.0000e-005**	**5.5200e-003**	**7.8400e-003**	**0.0134**	**2.5700e-003**	**7.2100e-003**	**9.7800e-003**			**8.7955**	**2.6000e-003**	**0.0000**	**8.8501**

3.2 Grading - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.5400e-003	0.1358	0.0916	2.4000e-004	5.3300e-003	2.3900e-003	7.7100e-003	1.4600e-003	2.1900e-003	3.6600e-003			22.0982	2.1000e-004	0.0000	22.1026
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	2.4000e-004	2.1600e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005			0.2205	2.0000e-005	0.0000	0.2208
Total	**9.7000e-003**	**0.1360**	**0.0938**	**2.4000e-004**	**5.5700e-003**	**2.3900e-003**	**7.9500e-003**	**1.5200e-003**	**2.1900e-003**	**3.7300e-003**			**22.3187**	**2.3000e-004**	**0.0000**	**22.3234**

3.3 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0272	0.2077	0.1213	1.8000e-004		0.0138	0.0138		0.0132	0.0132			16.3820	3.8300e-003	0.0000	16.4624
Total	**0.0272**	**0.2077**	**0.1213**	**1.8000e-004**		**0.0138**	**0.0138**		**0.0132**	**0.0132**			**16.3820**	**3.8300e-003**	**0.0000**	**16.4624**

3.3 Building Construction - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4500e-003	0.0349	0.0235	6.0000e-005	1.3700e-003	6.1000e-004	1.9800e-003	3.8000e-004	5.6000e-004	9.4000e-004			5.6743	5.0000e-005	0.0000	5.6755
Vendor	3.1000e-004	2.1500e-003	3.2200e-003	0.0000	9.0000e-005	4.0000e-005	1.3000e-004	3.0000e-005	4.0000e-005	6.0000e-005			0.3145	0.0000	0.0000	0.3146
Worker	6.3000e-004	9.4000e-004	8.6300e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004			0.8819	6.0000e-005	0.0000	0.8832
Total	**3.3900e-003**	**0.0380**	**0.0354**	**7.0000e-005**	**2.4200e-003**	**6.6000e-004**	**3.0800e-003**	**6.7000e-004**	**6.1000e-004**	**1.2600e-003**			**6.8707**	**1.1000e-004**	**0.0000**	**6.8733**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0272	0.2077	0.1213	1.8000e-004		0.0138	0.0138		0.0132	0.0132			16.3820	3.8300e-003	0.0000	16.4624
Total	**0.0272**	**0.2077**	**0.1213**	**1.8000e-004**		**0.0138**	**0.0138**		**0.0132**	**0.0132**			**16.3820**	**3.8300e-003**	**0.0000**	**16.4624**

3.3 Building Construction - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4500e-003	0.0349	0.0235	6.0000e-005	1.3700e-003	6.1000e-004	1.9800e-003	3.8000e-004	5.6000e-004	9.4000e-004			5.6743	5.0000e-005	0.0000	5.6755
Vendor	3.1000e-004	2.1500e-003	3.2200e-003	0.0000	9.0000e-005	4.0000e-005	1.3000e-004	3.0000e-005	4.0000e-005	6.0000e-005			0.3145	0.0000	0.0000	0.3146
Worker	6.3000e-004	9.4000e-004	8.6300e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004			0.8819	6.0000e-005	0.0000	0.8832
Total	**3.3900e-003**	**0.0380**	**0.0354**	**7.0000e-005**	**2.4200e-003**	**6.6000e-004**	**3.0800e-003**	**6.7000e-004**	**6.1000e-004**	**1.2600e-003**			**6.8707**	**1.1000e-004**	**0.0000**	**6.8733**

3.4 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0118	0.1304	0.0748	1.1000e-004		7.2600e-003	7.2600e-003		6.6800e-003	6.6800e-003			10.7206	3.1700e-003	0.0000	10.7871
Paving	0.0102					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	**0.0220**	**0.1304**	**0.0748**	**1.1000e-004**		**7.2600e-003**	**7.2600e-003**		**6.6800e-003**	**6.6800e-003**			**10.7206**	**3.1700e-003**	**0.0000**	**10.7871**

3.4 Paving - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.1800e-003	0.0453	0.0305	8.0000e-005	1.7800e-003	8.0000e-004	2.5700e-003	4.9000e-004	7.3000e-004	1.2200e-003			7.3661	7.0000e-005	0.0000	7.3676
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	4.7000e-004	4.3100e-003	1.0000e-005	4.8000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004			0.4409	3.0000e-005	0.0000	0.4416
Total	**3.4900e-003**	**0.0457**	**0.0349**	**9.0000e-005**	**2.2600e-003**	**8.0000e-004**	**3.0600e-003**	**6.2000e-004**	**7.3000e-004**	**1.3500e-003**			**7.8070**	**1.0000e-004**	**0.0000**	**7.8092**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0118	0.1304	0.0748	1.1000e-004		7.2600e-003	7.2600e-003		6.6800e-003	6.6800e-003			10.7206	3.1700e-003	0.0000	10.7871
Paving	0.0102					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	**0.0220**	**0.1304**	**0.0748**	**1.1000e-004**		**7.2600e-003**	**7.2600e-003**		**6.6800e-003**	**6.6800e-003**			**10.7206**	**3.1700e-003**	**0.0000**	**10.7871**

3.4 Paving - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.1800e-003	0.0453	0.0305	8.0000e-005	1.7800e-003	8.0000e-004	2.5700e-003	4.9000e-004	7.3000e-004	1.2200e-003			7.3661	7.0000e-005	0.0000	7.3676
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	4.7000e-004	4.3100e-003	1.0000e-005	4.8000e-004	0.0000	4.9000e-004	1.3000e-004	0.0000	1.3000e-004			0.4409	3.0000e-005	0.0000	0.4416
Total	**3.4900e-003**	**0.0457**	**0.0349**	**9.0000e-005**	**2.2600e-003**	**8.0000e-004**	**3.0600e-003**	**6.2000e-004**	**7.3000e-004**	**1.3500e-003**			**7.8070**	**1.0000e-004**	**0.0000**	**7.8092**

3.5 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0290					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Off-Road	2.2300e-003	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003			1.2766	1.8000e-004	0.0000	1.2805
Total	**0.0312**	**0.0139**	**9.6100e-003**	**1.0000e-005**		**1.2300e-003**	**1.2300e-003**		**1.2300e-003**	**1.2300e-003**			**1.2766**	**1.8000e-004**	**0.0000**	**1.2805**

3.5 Architectural Coating - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	8.6000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005			0.0882	1.0000e-005	0.0000	0.0883
Total	**6.0000e-005**	**9.0000e-005**	**8.6000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**			**0.0882**	**1.0000e-005**	**0.0000**	**0.0883**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0290					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Off-Road	2.2300e-003	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003			1.2766	1.8000e-004	0.0000	1.2805
Total	**0.0312**	**0.0139**	**9.6100e-003**	**1.0000e-005**		**1.2300e-003**	**1.2300e-003**		**1.2300e-003**	**1.2300e-003**			**1.2766**	**1.8000e-004**	**0.0000**	**1.2805**

3.5 Architectural Coating - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	8.6000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005			0.0882	1.0000e-005	0.0000	0.0883
Total	**6.0000e-005**	**9.0000e-005**	**8.6000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**			**0.0882**	**1.0000e-005**	**0.0000**	**0.0883**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.455690	0.042546	0.214770	0.152257	0.068772	0.010100	0.016640	0.021228	0.002325	0.001418	0.008694	0.000867	0.004695

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.7207	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.6000e-004	0.0000	0.0000	2.7000e-004
Unmitigated	1.7207	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.6000e-004	0.0000	0.0000	2.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3937					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3270					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.6000e-004	0.0000	0.0000	2.7000e-004
Total	**1.7207**	**0.0000**	**1.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**2.6000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3937					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3270					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000			2.6000e-004	0.0000	0.0000	2.7000e-004
Total	**1.7207**	**0.0000**	**1.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**			**2.6000e-004**	**0.0000**	**0.0000**	**2.7000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

OZONE Impact Analysis: Mortality/Morbidity

Air District/Basin	Ozone Standards (ppm)				Current Attainment Status[1]				2014 Maximum Ozone Concentration (ppm)[2]		Ozone Precursor NO_X + VOC/ROG Inventory[4]		Project Impacts		
	State		Federal		State		Federal								
	1 hour	8 hour	1 hour	8 hour	1 hour	8 hour	1 hour	8 hour	1 hour	8 hour	Tons/Day	Year	Incremental Increase in Ozone, ppb	Mortality	Mobidity
SCAQMD					N	N	--	N	0.13	0.106	1351	2012	0.002	0.01	0.01
VCAPCD					N	N	--	N	0.092	0.085	121.5	2002	0.012	0.03	0.05
SBCAPCD					N	N	--	U/A	0.102	0.089	69.8	2007	0.040	0.13	0.15
SLOAPCD					A	N	--	N	0.081	0.076	96.9	2009	0.015	0.06	0.06
MBUAPCD					N	N	--	U/A	0.083	0.075	120	2010	0.020	0.06	0.08
SMAQMD					N	N	--	N	0.102	0.083	133	2010	0.007	0.02	0.03
SJVAPCD					N	N	--	N	0.113	0.111	1035	2012	0.002	0.01	0.01
Yolo/Solano AQMD[3]					N	N	--	N	0.113	0.111	17.3	2008	0.059	0.18	0.23
BAAQMD	0.09	0.07	--	0.075	N	N	--	N	0.079	0.096	622	2012	0.006	0.02	0.02
PCAPCD					N	N	--	N	0.124	0.105	54	2010	0.050	0.17	0.19
Nevada/Northern Sierra					N	N	--	N	0.128	0.12	50	est.	0.020	0.08	0.08
Feather River					N	N	--	A	0.091	0.086	181	2012	0.004	0.01	0.01
Butte					N	N	--	N	0.088	0.081	31	2012	0.034	0.17	0.13
Tehama					N	N	--	A	0.101	0.085	18	2012	0.055	0.26	0.21
Shasta					N	N	--	A	0.094	0.081	39	2012	0.043	0.20	0.17
Siskiyou					A	A	--	A	0.076	0.072	20	2012	0.092	0.46	0.36
Mojave					N	N	--	N	0.119	0.108	144	2012	0.043	0.13	0.17

[1] Attainment status = Attainment (A), Non-Attainment (N), or Unclassifiable Attainment (U/A).

[2] Source – CA Air Resources Board Air Quality and Meteorological Information System (AQMIS) through 6/10/14.

[3] Combined air quality management district for Yolo and Solano Counties, separate air basin ozone precursor data available.

[4] Source – Air quality management or control district Clean Air Plan for year annotated except SJVAPCD.

[5] Source – Air Resources Board Almanac 2012 data.

Mainline Rail Routes: District Thresholds

Mitigated

Thresholds of Significance							Project Emissions, lbs/day		Project Emissions, tpy			
Air District	NO_X		VOC/ROG		Diesel Particulate		NOx	VOC	NOx	VOC	Sig NOx?	Sign VOC?
	Daily	Annual	Daily	Annual	Daily	Annual						
SCAQMD	55 lbs.		55 lbs.				56.55	6.11			N	N
VCAPCD[1]	25 lbs.		25 lbs.				29.88	3.22			Y	N
SBCAPCD[2]	55 lbs.	10 tons	55 lbs.	10 tons			55.95	6.03	5.38	0.22	Y	N
SLOAPCD[3]	25 lbs.	25 tons	25 lbs.	25 tons	1.25 lbs.		34.66	3.73	3.33	0.13	Y	N
MBUAPCD[4]	137 lbs.		137 lbs.				58.64	6.32			N	N
SMAQMD	65 lbs.		65 lbs.				19.59	2.11			N	N
SJVAPCD[5]		10 tons		10 tons			25.93	2.79	2.49	0.10	N	N
Yolo/Solano AQMD		10 tons		10 tons			16.61	1.79	1.60	0.06	N	N
BAAQMD	80 lbs	15 tons	80 lbs	15 tons			71.59	7.71	6.88	0.28	N	N
PCAPCD	82 lbs		82 lbs				46.17	4.95	4.44	0.20	N	N
Nevada/Northern Sierra	25 lbs.		25 lbs.				15.30	1.60	1.50	0.10	N	N
Feather River	25 lbs.		25 lbs.				13.60	1.50	1.30	0.00	N	N
Butte	25 lbs.		25 lbs.				23.62	2.54	2.27	0.09	N	N
Tehama	25 lbs.		25 lbs.				20.98	2.26	2.02	0.08	N	N
Shasta	25 lbs.		25 lbs.				37.19	4.01	3.58	0.14	Y	N
Siskiyou	25 lbs.		25 lbs.				46.21	4.98	4.44	0.18	Y	N
Mojave	137 lbs.	25 tons	137 lbs.	25 tons			103.80	11.20	10.00	0.40	N	N

1 Outside the Ojai Planning Area.

2 Based on SBCAPCD New Source Review Rule.

3 Threshold value is for NO_X and ROG combined.

4 Threshold value for direct plus indirect sources.

5 Values provided are recommended thresholds of significance.

Calculation for Ozone Excess Mortality and Morbidity

BAAQMD

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.01	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00046%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.02**	Output
Increased ozone (ppb)	0	0	0.006119352	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.00125%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.02**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**6.78**	per 1000 persons/year
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year
	(see Table B-17 from CARB 2005 (volume 4)	

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.003
PAR	0.000	0.000	0.003
Δy	0.000	0.000	0.020
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.002
PAR	0.000	0.000	0.002
Δy	0.000	0.000	0.024

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

Yolo/Solano AQMD3

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.06	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00443%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.18**	Output
Increased ozone (ppb)	0	0	0.059008092	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.01210%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.23**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**6.37**	per 1000 persons/year
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year
	(see Table B-17 from CARB 2005 (volume 4)	

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.029
PAR	0.000	0.000	0.028
Δy	0.000	0.000	0.181
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.023
PAR	0.000	0.000	0.023
Δy	0.000	0.000	0.230

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

SJVAPCD

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.00	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00012%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.01**	Output
Increased ozone (ppb)	0	0	0.001540451	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.00032%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.01**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**6.98**	per 1000 persons/year
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year
	(see Table B-17 from CARB 2005 (volume 4)	

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.001
PAR	0.000	0.000	0.001
Δy	0.000	0.000	0.005
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.001
PAR	0.000	0.000	0.001
Δy	0.000	0.000	0.006

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

SMAQMD

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.01	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00051%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.02**	Output
Increased ozone (ppb)	0	0	0.006772444	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.00139%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.03**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**7.14**	per 1000 persons/year
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year
	(see Table B-17 from CARB 2005 (volume 4)	

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.003
PAR	0.000	0.000	0.003
Δy	0.000	0.000	0.024
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.003
PAR	0.000	0.000	0.003
Δy	0.000	0.000	0.027

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

MBUAPCD

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.02	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00152%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.06**	Output
Increased ozone (ppb)	0	0	0.020299599	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.00416%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.08**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**5.88**	per 1000 persons/year
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year
	(see Table B-17 from CARB 2005 (volume 4)	

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.010
PAR	0.000	0.000	0.010
Δy	0.000	0.000	0.058
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.008
PAR	0.000	0.000	0.008
Δy	0.000	0.000	0.080

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

SLOAPCD

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.02	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00113%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.06**	Output
Increased ozone (ppb)	0	0	0.015057519	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.00309%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.06**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**7.87**	per 1000 persons/year
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year
	(see Table B-17 from CARB 2005 (volume 4)	

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.007
PAR	0.000	0.000	0.007
Δy	0.000	0.000	0.058
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.006
PAR	0.000	0.000	0.006
Δy	0.000	0.000	0.059

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

SBCAPCD

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.04	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00296%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.13**	Output
Increased ozone (ppb)	0	0	0.039514477	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.00810%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.15**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**6.8**	per 1000 persons/year
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year
	(see Table B-17 from CARB 2005 (volume 4)	

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.020
PAR	0.000	0.000	0.019
Δy	0.000	0.000	0.130
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.015
PAR	0.000	0.000	0.015
Δy	0.000	0.000	0.154

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

VCAPCD

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.01	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00087%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.03**	Output
Increased ozone (ppb)	0	0	0.011577494	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.00237%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.05**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**5.76**	per 1000 persons/year
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year

(see Table B-17 from CARB 2005 (volume 4)

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.006
PAR	0.000	0.000	0.006
Δy	0.000	0.000	0.033
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.005
PAR	0.000	0.000	0.004
Δy	0.000	0.000	0.045

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

SCAQMD

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.00	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00015%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.01**	Output
Increased ozone (ppb)	0	0	0.001979573	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.00041%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.01**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**6.08**	per 1000 persons/year
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year
	(see Table B-17 from CARB 2005 (volume 4)	

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.001
PAR	0.000	0.000	0.001
Δy	0.000	0.000	0.006
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.001
PAR	0.000	0.000	0.001
Δy	0.000	0.000	0.008

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

PCAPCD

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.04970	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00373%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.17**	Output
Increased ozone (ppb)	0	0	0.04970	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.01019%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.19**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**7.00**	per 1000 persons/year for	Placer County
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year for	Placer County
	(see Table B-17 from CARB 2005 (volume 4)		

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.025
PAR	0.000	0.000	0.024
Δy	0.000	0.000	0.168
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.020
PAR	0.000	0.000	0.019
Δy	0.000	0.000	0.194

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

Nevada/Northern Sierra

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.02028	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00152%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.08**	Output
Increased ozone (ppb)	0	0	0.02028	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.00416%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.08**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**8.56**	per 1000 persons/year for	Nevada/Northern Sierra
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year for	Nevada/Northern Sierra

(see Table B-17 from CARB 2005 (volume 4)

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.010
PAR	0.000	0.000	0.010
Δy	0.000	0.000	0.085
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.008
PAR	0.000	0.000	0.008
Δy	0.000	0.000	0.080

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

Feather River

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.00359	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00027%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.01**	Output
Increased ozone (ppb)	0	0	0.00359	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.00074%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.01**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**7.43**	per 1000 persons/year for	Feather River
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year for	Feather River
	(see Table B-17 from CARB 2005 (volume 4)		

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.002
PAR	0.000	0.000	0.002
Δy	0.000	0.000	0.013
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.001
PAR	0.000	0.000	0.001
Δy	0.000	0.000	0.014

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

Butte

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.03418	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00256%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.17**	Output
Increased ozone (ppb)	0	0	0.03418	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.00701%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.13**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**10.40**	per 1000 persons/year for	Butte
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year for	Butte
	(see Table B-17 from CARB 2005 (volume 4)		

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.017
PAR	0.000	0.000	0.017
Δy	0.000	0.000	0.172
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.013
PAR	0.000	0.000	0.013
Δy	0.000	0.000	0.134

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

Tehama

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.05487	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00412%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.26**	Output
Increased ozone (ppb)	0	0	0.05487	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.01125%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.21**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**9.90**	per 1000 persons/year for	Tehama
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year for	Tehama
	(see Table B-17 from CARB 2005 (volume 4)		

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.027
PAR	0.000	0.000	0.026
Δy	0.000	0.000	0.262
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.022
PAR	0.000	0.000	0.021
Δy	0.000	0.000	0.214

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

Shasta

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.04278	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00321%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.20**	Output
Increased ozone (ppb)	0	0	0.04278	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.00877%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.17**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**9.50**	per 1000 persons/year for	Shasta
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year for	Shasta
	(see Table B-17 from CARB 2005 (volume 4)		

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.021
PAR	0.000	0.000	0.021
Δy	0.000	0.000	0.197
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.017
PAR	0.000	0.000	0.016
Δy	0.000	0.000	0.167

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

Siskiyou

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.09214	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00691%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.46**	Output
Increased ozone (ppb)	0	0	0.09214	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.01889%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.36**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**10.42**	per 1000 persons/year for	Siskiyou
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year for	Siskiyou
	(see Table B-17 from CARB 2005 (volume 4)		

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.046
PAR	0.000	0.000	0.044
Δy	0.000	0.000	0.459
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.036
PAR	0.000	0.000	0.035
Δy	0.000	0.000	0.356

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Calculation for Ozone Excess Mortality and Morbidity

Mojave

	Construction	Operations	Traffic	
Increased ozone (ppb)	0	0	0.04313	Input
Increased Mortality Rate	0.00000%	0.00000%	0.00323%	Output
Increased Mortality (per thousand exposed)	**0.00**	**0.00**	**0.13**	Output
Increased ozone (ppb)	0	0	0.04313	Input
Increased Morbidity Rate	0.00000%	0.00000%	0.00884%	Output
Increased Morbidity (per thousand exposed)	**0.00**	**0.00**	**0.17**	Output

Compare Results to:

Baseline Mortality (CARB, 2005)	**6.10**	per 1000 persons/year for	Mojave
Baseline Morbidity (CARB, 2005)	**10.13**	per 1000 persons/year for	Mojave
	(see Table B-17 from CARB 2005 (volume 4)		

Calculation of Mortality and Morbidity Rates

Mortality	**Construction**	**Operations**	**Traffic**
β	0.489	0.489	0.489
RR	1.000	1.000	1.021
PAR	0.000	0.000	0.021
Δy	0.000	0.000	0.127
Morbidity	**Construction**	**Operations**	**Traffic**
β	0.389	0.389	0.389
RR	1.000	1.000	1.017
PAR	0.000	0.000	0.017
Δy	0.000	0.000	0.168

Slope of

Increase in Mortality (CARB, 2005)	**0.75%**	**per 10 ppb increase**
Increase in Morbidity (CARB, 2005)	**2.05%**	**per 10 ppb increase**

Most of the epidemiologic studies used in our estimates have used a log-linear model to represent the relationship between ozone exposure and the health endpoint. In this case, the relationship between ozone levels and the natural logarithm of the health effect is estimated by a linear regression. This regression model generates a beta coefficient that relates the percent change in the health outcome to a unit increase in ozone. Existing studies have reported either a beta coefficient for a unit change in exposure or a relative risk (RR) for a specified change in ozone concentrations, such as 10 ppb 1-hour maximum. The RR is defined as the ratio of the health effect predicted from the higher exposure relative to some baseline exposure. Health effect estimates presented in a given study as RR for a specified change in ozone, Δ O3, were converted into an estimated beta using the equation:

$\beta = \ln(RR) / \Delta O3$

The daily change in ozone at each monitoring site i.e., the difference between current ozone and the standard (= ΔO3) was used to calculate RR:

$RR = \exp(\beta \Delta O3)$

Then, the RR estimates were used to determine the population attributable risk (PAR), which represents the proportion of the health effects in the whole population that may be prevented if the cause (ozone pollution in our case) is reduced by a given amount. Specifically,

$PAR = (RR - 1) / RR$

Ultimately, the estimated impact on the health outcome is calculated as follows:

$\Delta y = PAR \times y0 \times pop$

where:

Δy = changes in the incidence of a health endpoint corresponding to a particular change in ozone,
y0 = baseline incidence rate/person within a defined at-risk subgroup, and
pop = population size of the group exposed.

Existing Baseline Mortaility and Morbidity by County

County Name	Mortality (Short-Term Exposures) Non-Accidental, All Ages	Morbidity, Hospital Admissions, All Respiratory, All Ages	ER Visits for Asthma, Age Under 18	School Loss Days, All Illness, Age 5-17	MRAD Age>18
Alameda County	6.60	10.13	3.81	5990.10	7805.39
Alpine County	7.40	10.13	3.81	5990.10	7805.39
Amador County	9.99	10.13	3.81	5990.10	7805.39
Butte County	10.40	10.13	3.81	5990.10	7805.39
Calaveras County	8.90	10.13	3.81	5990.10	7805.39
Colusa County	7.10	10.13	3.81	5990.10	7805.39
Contra Costa County	6.78	10.13	3.81	5990.10	7805.39
Del Norte County	8.41	10.13	3.81	5990.10	7805.39
El Dorado County	6.29	10.13	3.81	5990.10	7805.39
Fresno County	6.41	10.13	3.81	5990.10	7805.39
Glenn County	7.71	10.13	3.81	5990.10	7805.39
Humboldt County	8.51	10.13	3.81	5990.10	7805.39
Imperial County	5.44	10.13	3.81	5990.10	7805.39
Inyo County	11.81	10.13	3.81	5990.10	7805.39
Kern County	6.60	10.13	3.81	5990.10	7805.39
Kings County	5.66	10.13	3.81	5990.10	7805.39
Lake County	13.13	10.13	3.81	5990.10	7805.39
Lassen County	5.75	10.13	3.81	5990.10	7805.39
Los Angeles County	6.08	10.13	3.81	5990.10	7805.39
Madera County	6.35	10.13	3.81	5990.10	7805.39
Marin County	7.47	10.13	3.81	5990.10	7805.39
Mariposa County	9.48	10.13	3.81	5990.10	7805.39
Mendocino County	8.89	10.13	3.81	5990.10	7805.39
Merced County	6.29	10.13	3.81	5990.10	7805.39
Modoc County	11.62	10.13	3.81	5990.10	7805.39
Mono County	3.87	10.13	3.81	5990.10	7805.39
Monterey County	5.88	10.13	3.81	5990.10	7805.39
Napa County	10.45	10.13	3.81	5990.10	7805.39
Nevada County	8.56	10.13	3.81	5990.10	7805.39
Orange County	5.68	10.13	3.81	5990.10	7805.39
Placer County	7.00	10.13	3.81	5990.10	7805.39
Plumas County	10.08	10.13	3.81	5990.10	7805.39
Riverside County	7.37	10.13	3.81	5990.10	7805.39
Sacramento County	7.14	10.13	3.81	5990.10	7805.39
San Benito County	5.06	10.13	3.81	5990.10	7805.39
San Bernardino County	6.10	10.13	3.81	5990.10	7805.39
San Diego County	6.41	10.13	3.81	5990.10	7805.39
San Francisco County	8.78	10.13	3.81	5990.10	7805.39
San Joaquin County	6.98	10.13	3.81	5990.10	7805.39
San Luis Obispo County	7.87	10.13	3.81	5990.10	7805.39
San Mateo County	6.77	10.13	3.81	5990.10	7805.39
Santa Barbara County	6.80	10.13	3.81	5990.10	7805.39
Santa Clara County	5.19	10.13	3.81	5990.10	7805.39
Santa Cruz County	6.56	10.13	3.81	5990.10	7805.39
Shasta County	9.50	10.13	3.81	5990.10	7805.39
Sierra County	9.26	10.13	3.81	5990.10	7805.39
Siskiyou County	10.42	10.13	3.81	5990.10	7805.39
Solano County	5.90	10.13	3.81	5990.10	7805.39
Sonoma County	8.17	10.13	3.81	5990.10	7805.39
Stanislaus County	7.22	10.13	3.81	5990.10	7805.39
Sutter County	7.43	10.13	3.81	5990.10	7805.39
Tehama County	9.90	10.13	3.81	5990.10	7805.39
Trinity County	10.73	10.13	3.81	5990.10	7805.39
Tulare County	6.71	10.13	3.81	5990.10	7805.39
Tuolumne County	9.50	10.13	3.81	5990.10	7805.39
Ventura County	5.76	10.13	3.81	5990.10	7805.39
Yolo County	6.37	10.13	3.81	5990.10	7805.39
Yuba County	7.26	10.13	3.81	5990.10	7805.39