

Appendix J

Air Emissions Calculations – Construction and Operation of the HPS Project Alternatives

This page intentionally left blank.

Appendix J - Air Emissions Calculations - Construction and Operation of the HPS Project Alternatives

Table J-1. 1993 Existing Conditions Based on Table 1 page 16-17; Hunters Point Shipyard Land Use Plan, Feb 1994

Table J-2. 1993 CARB EMFAC Winter Emission Factors

Table J-3. 1993 CARB EMFAC Winter PM2.5 Emission Factors

Table J-4. 1993 CARB EMFAC Summer Emission Factors

Table J-5. 1993 CARB EMFAC Summer PM2.5 Emission Factors

Table J-6. 1993 CARB EMFAC Composite Mobile Emission Factors

Table J-7. 1993 Existing Conditions Mobile Emissions

Table J-8. 1993 Existing Conditions Operational Emissions

Table J-9A. Emission Source Data for Proposed Construction Equipment (Fulltime)

Table J-9B. Activity Data - Construction Truck Traffic

Table J-9C. Construction Emissions for Truck Traffic

Table J-10. Emission Factors for Diesel-Powered Construction Equipment - Years 2010 - 2018

Table J-11. Yearly Composite Emission Factors for On-Road Equipment - Years 2010 - 2018

Table J-12. Total Construction Emissions associated with the Proposed Action

Table J-13. Emission Source Data for Proposed Construction Activities [Part Time]

Table J-14. HPS Construction Activity by Year Emissions [Half-Time]

Table J-15. Emission Source Data for Proposed Construction Activities [Part Time]

Table J-16. Total Emissions associated with the Proposed Action [Part Time]

Table J-17. HPS Construction Emissions (lbs/day)

Table J-18. 2010 URBEMIS [Off-Road] Emission Factors (g/bhp-hr)

Table J-19. 2020 URBEMIS [Off-Road] Emission Factors (g/bhp-hr)

Table J-20-A. Yearly On-Road Composite Emission Factors - Years 2010 -2018

Table J-20-B. Yearly On-Road Composite Emission Factors - Years 2010 -2018

Table J-20-C. Yearly On-Road Composite Emission Factors - Years 2010 -2018

Table J-20-D. Yearly On-Road Composite Emission Factors - Years 2010 -2018

Table J-20-E. Yearly On-Road Composite Emission Factors - Years 2010 -2018

Table J-20-F. Yearly On-Road Composite Emission Factors - Years 2010 -2018

Table J-20-G. Yearly On-Road Composite Emission Factors - Years 2010 -2018

Table J-20-H. Yearly On-Road Composite Emission Factors - Years 2010 -2018

Table J-21. Land Uses for Proposed HPS Project Alternatives

Table J-22. SEIS Alt1 - Stadium Plan Alternative

Table J-23. SEIS Alt1A - Stadium Plan/No Bridge Alternative

Table J-24. SEIS Alt2 - Non-Stadium Plan/Additional R&D Alternative

Table J-25. SEIS Alt2A - Non-Stadium Plan/Housing and R&D Alternative

Table J-26. SEIS Alt3 - Non-Stadium Plan/Additional Housing Alternative

Table J-27. SEIS Alt4 - Non-Stadium Plan/Reduced Development Alternative

Table J-28. SEIS - No Project Alternative

Table J-29. HPS Alternatives' 1993 NAA Construction Emissions Comparison (lbs/day)

Table J-1. 1993 Existing Conditions Based on Table 1 page 16-17; Hunters Point Shipyard Land Use Plan, Feb 1994

Urbemis Inputs	Unit Amt	Unit Type
General Light Industry	181.37	1000 sq. ft.
Industrial	319.99	1000 sq. ft.
Racquetball/health	14.01	1000 sq. ft.
Fast food rest. w/o drive thru	12	1000 sq. ft.
Parking Lot	17.5	1000 sq. ft.
Public/Military	681.68	1000 sq. ft.

Parking Lot areas were calculated in Urbemis and were not included in the Urbemis Inputs.

Table J-2. 1993 CARB EMFAC Winter Emission Factors

Title : San Francisco Air Basin Avg Winter CYr 1993 Default Title
 Version : Emfac2007 V2.3 Nov 1 2006
 Run Date : 2010/03/02 15:58:42
 Scen Year: 1993 -- All model years in the range 1965 to 1993 selected
 Season : Winter
 Area : San Francisco Air Basin Average
 I/M Stat : BAR 1990A (1990) -- Using I/M schedule for area 43 San Francisco (SF)
 Emissions: Tons Per Day

	LDA-NCAT	LDA-CAT	LDA-DSL	LDA-TOT	LDT1-NCA	LDT1-CAT	LDT1-DSL	ALL-TOT	
Vehicles	257201	2211470	37454	2506130	103201	545620	19197	4138180	
VMT/1000	5312	74961	1009	81282	2552	19680	665	137152	
Trips	1371730	14197600	232968	15802300	545829	3496880	122443	27691700	
Reactive Organic Gas Emissions									
Run Exh	33.8	30.58	0.36	64.74	16.72	10.86	0.18	138.22	4.99E-06
Idle Exh	0	0	0	0	0	0	0	0.93	3.36E-08
Start Ex	9.05	31.89	0	40.94	3.66	8.73	0	83.51	3.02E-06
Total Ex	42.84	62.48	0.36	105.68	20.38	19.59	0.18	222.65	8.04E-06
Diurnal	0.94	2.93	0	3.87	0.37	0.77	0	6.39	2.31E-07
Hot Soak	6.98	11.5	0	18.48	2.77	3.41	0	32.13	1.16E-06
Running	31.58	50.51	0	82.09	8.76	7.91	0	121.09	4.37E-06
Resting	0.36	0.67	0	1.03	0.14	0.19	0	1.75	6.32E-08
Total	82.7	128.08	0.36	211.15	32.43	31.87	0.18	384.01	1.39E-05
Carbon Monoxide Emissions									
Run Exh	445.03	775.4	0.91	1221.34	220.19	353.42	0.64	2613.47	9.44E-05
Idle Exh	0	0	0	0	0	0	0	2.59	9.35E-08
Start Ex	44.05	364.95	0	409	18.15	122.75	0	832.71	3.01E-05
Total Ex	489.08	1140.35	0.91	1630.34	238.33	476.16	0.64	3448.77	1.25E-04
Oxides of Nitrogen Emissions									
Run Exh	33.9	114.42	1.84	150.17	16.25	47.19	1.04	400.05	1.44E-05
Idle Exh	0	0	0	0	0	0	0	1.76	6.36E-08
Start Ex	2.63	13.28	0	15.9	1.04	4.34	0	36.3	1.31E-06
Total Ex	36.53	127.7	1.84	166.07	17.3	51.53	1.04	438.12	1.58E-05
Carbon Dioxide Emissions (000)									
Run Exh	2.84	32.81	0.42	36.06	1.36	9.32	0.26	70.09	2.53E-06
Idle Exh	0	0	0	0	0	0	0	0.16	5.78E-09
Start Ex	0.3	1.31	0	1.61	0.12	0.35	0	2.82	1.02E-07
Total Ex	3.14	34.12	0.42	37.67	1.48	9.67	0.26	73.07	2.64E-06
PM10 Emissions									
Run Exh	0.18	0.59	0.28	1.05	0.09	0.19	0.13	7.84	2.83E-07
Idle Exh	0	0	0	0	0	0	0	0.19	6.86E-09
Start Ex	0.02	0.06	0	0.08	0.01	0.02	0	0.17	6.14E-09
Total Ex	0.2	0.65	0.28	1.13	0.09	0.21	0.13	8.19	2.96E-07
TireWear	0.05	0.66	0.01	0.72	0.02	0.17	0.01	1.28	4.62E-08
BrakeWr	0.07	1.04	0.01	1.12	0.04	0.27	0.01	1.93	6.97E-08
Total	0.32	2.35	0.3	2.97	0.15	0.66	0.14	11.4	4.12E-07
Lead	0	0	0	0	0	0	0	0	
SOx	0.39	3.49	0.13	4.01	0.19	1.01	0.08	9.55	3.45E-07
Fuel Consumption (000 gallons)									
Gasoline	413.89	3698.67	0	4112.56	196.5	1073.82	0	7225.14	
Diesel	0	0	37.38	37.38	0	0	23.47	773.03	

Table J-3. 1993 CARB EMFAC Winter PM_{2.5} Emission Factors

Title : San Francisco Air Basin Avg Winter CYr 1993 Default Title

Version : Emfac2007 V2.3 Nov 1 2006

Run Date : 2010/03/03 08:35:21

Scen Year: 1993 -- All model years in the range 1965 to 1993 selected

Season : Winter

Area : San Francisco Air Basin Average

I/M Stat : BAR 1990A (1990) -- Using I/M schedule for area 43 San Francisco (SF)

Emissions: Tons Per Day

	LDA-NCAT	LDA-CAT	LDA-DSL	LDA-TOT	LDT1-NCAT	LDT1-CAT	LDT1-DSL	LDT1-TOT	LDT2-NCAT	LDT2-CAT	LDT2-DSL	ALL-TOT
Vehicles	257201	2211470	37454	2506130	103201	545620	19197	668019	59142	498983	7081	4138180
VMT/1000	5312	74961	1009	81282	2552	19680	665	22896	1506	18967	235	137152
Trips	1371730	14197600	232968	15802300	545829	3496880	122443	4165160	327748	3212990	44747	27691700
PM2.5 Emissions												
Run Exh	0.14	0.54	0.26	0.94	0.07	0.18	0.12	0.36	0.04	0.27	0.05	7.16
Idle Exh	0	0	0	0	0	0	0	0	0	0	0	0.17
Start Ex	0.01	0.06	0	0.07	0.01	0.02	0	0.02	0	0.03	0	0.15
Total Ex	0.15	0.6	0.26	1.01	0.07	0.2	0.12	0.39	0.04	0.3	0.05	7.48
TireWear	0.01	0.17	0	0.18	0.01	0.04	0	0.05	0	0.04	0	0.32
BrakeWr	0.03	0.44	0.01	0.48	0.02	0.12	0	0.14	0.01	0.11	0	0.83
Total	0.2	1.21	0.27	1.68	0.09	0.36	0.12	0.57	0.06	0.45	0.05	8.62
Lead	0	0	0	0	0	0	0	0	0	0	0	0
SOx	0.39	3.49	0.13	4.01	0.19	1.01	0.08	1.28	0.11	0.96	0.03	9.55
Fuel Consumption (000 gallons)												
Gasoline	413.89	3698.67	0	4112.56	196.5	1073.82	0	1270.32	114.97	1012.21	0	7225.14
Diesel	0	0	37.38	37.38	0	0	23.47	23.47	0	0	8.45	773.03

Table J-4. 1993 CARB EMFAC Summer Emission Factors

Title : San Francisco Air Basin Avg Summer CYr 1993 Default Title
 Version : Emfac2007 V2.3 Nov 1 2006
 Run Date : 2010/03/02 14:11:07
 Scen Year: 1993 -- All model years in the range 1965 to 1993 selected
 Season : Summer
 Area : San Francisco Air Basin Average
 I/M Stat : BAR 1990A (1990) -- Using I/M schedule for area 43 San Francisco (SF)
 Emissions: Tons Per Day

	LDA-NCAT	LDA-CAT	LDA-DSL	LDA-TOT	LDT1-NCA	LDT1-CAT	LDT1-DSL	LDT1-TOT	LDT2-NCA	LDT2-CAT	LDT2-DSL	ALL-TOT
Vehicles	257201	2211470	37454	2506130	103201	545620	19197	668019	59142	498983	7081	4138180
VMT/1000	5312	74961	1009	81282	2552	19680	665	22896	1506	18967	235	137152
Trips	1371730	14197600	232968	15802300	545829	3496880	122443	4165160	327748	3212990	44747	27691700
Reactive Organic Gas Emissions												
Run Exh	30.73	35.52	0.36	66.61	14.93	12.22	0.18	27.33	8.05	11.17	0.07	139.45
Idle Exh	0	0	0	0	0	0	0	0	0	0	0	0.82
Start Ex	6.68	22.08	0	28.75	2.7	5.89	0	8.59	1.48	5.82	0	57.75
Total Ex	37.41	57.59	0.36	95.36	17.63	18.1	0.18	35.92	9.53	16.99	0.07	198.02
Diurnal	3.19	9.06	0	12.26	1.27	2.44	0	3.71	0.7	2.03	0	20.44
Hot Soak	5.51	10.3	0	15.81	2.19	2.93	0	5.12	1.3	2.31	0	27.04
Running	27.37	41.68	0	69.05	7.53	6.3	0	13.83	3.52	4.82	0	101.71
Resting	2.37	4.7	0	7.07	0.95	1.36	0	2.31	0.53	1.13	0	12.22
Total	75.85	123.33	0.36	199.54	29.56	31.14	0.18	60.88	15.58	27.29	0.07	359.43
Carbon Monoxide Emissions												
Run Exh	469.7	1015.33	0.91	1485.94	223.47	443.64	0.64	667.75	126.08	368.15	0.22	3076.34
Idle Exh	0	0	0	0	0	0	0	0	0	0	0	1.75
Start Ex	47.39	241.09	0	288.47	19.52	79.94	0	99.46	11.29	67.54	0	602.96
Total Ex	517.09	1256.42	0.91	1774.42	242.99	523.57	0.64	767.21	137.37	435.69	0.22	3681.05
Oxides of Nitrogen Emissions												
Run Exh	30.93	101.9	1.82	134.64	14.6	41.37	1.03	57	8.5	43.75	0.38	365.03
Idle Exh	0	0	0	0	0	0	0	0	0	0	0	1.88
Start Ex	2.29	11.23	0	13.51	0.91	3.67	0	4.58	0.54	4.35	0	31.25
Total Ex	33.21	113.13	1.82	148.16	15.51	45.04	1.03	61.58	9.04	48.09	0.38	398.16
Carbon Dioxide Emissions (000)												
Run Exh	2.96	35.7	0.42	39.08	1.39	9.94	0.26	11.59	0.82	9.55	0.09	74.68
Idle Exh	0	0	0	0	0	0	0	0	0	0	0	0.18
Start Ex	0.3	1.31	0	1.61	0.12	0.35	0	0.47	0.07	0.32	0	2.82
Total Ex	3.26	37.01	0.42	40.69	1.51	10.29	0.26	12.07	0.9	9.87	0.09	77.69
PM10 Emissions												
Run Exh	0.18	0.59	0.28	1.05	0.09	0.19	0.13	0.41	0.05	0.29	0.05	7.84
Idle Exh	0	0	0	0	0	0	0	0	0	0	0	0.13
Start Ex	0.02	0.06	0	0.08	0.01	0.02	0	0.03	0	0.03	0	0.17
Total Ex	0.2	0.65	0.28	1.13	0.09	0.21	0.13	0.44	0.06	0.32	0.05	8.14
TireWear	0.05	0.66	0.01	0.72	0.02	0.17	0.01	0.2	0.01	0.17	0	1.28
BrakeWr	0.07	1.04	0.01	1.12	0.04	0.27	0.01	0.32	0.02	0.26	0	1.93
Total	0.32	2.35	0.3	2.97	0.15	0.66	0.14	0.95	0.09	0.75	0.06	11.35
Lead	0	0	0	0	0	0	0	0	0	0	0	0
SOx	0.41	3.79	0.13	4.32	0.19	1.08	0.08	1.35	0.11	1.03	0.03	10.03
Fuel Consumption (000 gallons)												
Gasoline	429.44	4011.74	0	4441.18	199.71	1144.29	0	1343.99	116.91	1086.31	0	7724.94
Diesel	0	0	37.38	37.38	0	0	23.47	23.47	0	0	8.45	774.62

Table J-5. 1993 CARB EMFAC Summer PM_{2.5} Emission Factors

Title : San Francisco Air Basin Avg Summer CYr 1993 Default Title

Version : Emfac2007 V2.3 Nov 1 2006

Run Date : 2010/03/03 08:17:59

Scen Year: 1993 -- All model years in the range 1965 to 1993 selected

Season : Summer

Area : San Francisco Air Basin Average

I/M Stat : BAR 1990A (1990) -- Using I/M schedule for area 43 San Francisco (SF)

Emissions: Tons Per Day

	LDA-NCAT	LDA-CAT	LDA-DSL	LDA-TOT	LDT1-NCA1	LDT1-CAT	LDT1-DSL	LDT1-TOT	LDT2-NCA1	LDT2-CAT	LDT2-DSL	ALL-TOT
Vehicles	257201	2211470	37454	2506130	103201	545620	19197	668019	59142	498983	7081	4138180
VMT/1000	5312	74961	1009	81282	2552	19680	665	22896	1506	18967	235	137152
Trips	1371730	14197600	232968	15802300	545829	3496880	122443	4165160	327748	3212990	44747	27691700
PM2.5 Emissions												
Run Exh	0.14	0.54	0.26	0.94	0.07	0.18	0.12	0.36	0.04	0.27	0.05	7.16
Idle Exh	0	0	0	0	0	0	0	0	0	0	0	0.12
Start Ex	0.01	0.06	0	0.07	0.01	0.02	0	0.02	0	0.03	0	0.15
Total Ex	0.15	0.6	0.26	1.01	0.07	0.2	0.12	0.39	0.04	0.3	0.05	7.43
TireWear	0.01	0.17	0	0.18	0.01	0.04	0	0.05	0	0.04	0	0.32
BrakeWr	0.03	0.44	0.01	0.48	0.02	0.12	0	0.14	0.01	0.11	0	0.83
Total	0.2	1.21	0.27	1.68	0.09	0.36	0.12	0.57	0.06	0.45	0.05	8.57
Lead	0	0	0	0	0	0	0	0	0	0	0	0
SOx	0.41	3.79	0.13	4.32	0.19	1.08	0.08	1.35	0.11	1.03	0.03	10.03
Fuel Consumption (000 gallons)												
Gasoline	429.44	4011.74	0	4441.18	199.71	1144.29	0	1343.99	116.91	1086.31	0	7724.94
Diesel	0	0	37.38	37.38	0	0	23.47	23.47	0	0	8.45	774.62

Table J-6. 1993 CARB EMFAC Composite Mobile Emission Factors

1993 Mobile Source Emission Factors (Winter)

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO ₂	Units
Run Exh	0.0100	0.03	0.19	0.0007	0.00057	0.00052	0.00506	(2)
Running	0.009							(1)
Idle Exh	0.00007	0.0000001	0.0000001		0.00001	0.00001	0.00001	(2)
Start Exh	0.00603	0.0000013	0.00003		0.00001	0.00001	0.00020	(2)
Evaporative	0.0029							(2)
Tire&Break Wear					0.00023	0.0001		(1)

Based on 27,691,700 average trips in the San Francisco Air Basin
 Units: (1) lbs/trip [of 5 miles] (2) lbs/trip
 CARB EMFAC2007 Burden Model Run

1993 Mobile Source Emission Factors (Summer)

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO ₂	Units
Run Exh	0.01	0.03	0.22	0.00	0.0006	0.0005171	0.005	(2)
Running	0.01							(1)
Idle Exh	0.00006	0.00	0.00		0.000009	0.000009	0.00001	(2)
Start Exh	0.004	0.00	0.04		0.00001	0.00001	0.0002	(2)
Evaporative	0.004							(2)
Tire&Break Wear					0.0002	0.0001		(1)

Based on 27,691,700 average trips in the San Francisco Air Basin
 Units: (1) lbs/trip [of 5 miles] (2) lbs/trip
 CARB EMFAC2007 Burden Model Run

Table J-7. 1993 Existing Conditions Mobile Emissions

	1993 Mobile Source Emissions Lbs/day						
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO ₂
Winter							
Run Exh	19.77	57.21	373.73	1.43	1.12	1.02	10.02
Running	0.10						
Idle Exh	0.13	0.00	0.00	-	0.03	0.02	0.02
Start Exh	0.07	0.00	0.00	-	0.00	0.00	0.00
Evaporative	5.76	-	-	-	-	-	-
Tire&Break Wear					0.00	0.00	
Area Source	7.55	6.41	5.38	-	0.01	0.01	7,688.04
Summer							
Run Exh	19.94	52.20	439.93	1.43	1.12	1.02	10.68
Running							
Idle Exh	19.77	57.21	373.73	1.43	1.12	1.02	10.02
Start Exh	8.26	4.47	86.23	-	0.02	0.02	0.40
Evaporative	8.54	-	-	-	-	-	-
Tire&Break Wear					0.00	0.00	
Area Source	8.36	6.50	14.56	-	0.03	0.03	7,701.84
Average Area Daily Emissions	7.96	6.46	9.97	-	0.02	0.02	7,694.94
Average Mobile Daily Emissions	9.15	21.39	159.20	0.54	0.34	0.31	3.89

Table J-8. 1993 Existing Conditions Operational Emissions

	1993 NAA Baseline Emissions Lbs/day						
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO ₂
Area	7.96	6.46	9.97	-	0.02	0.02	7,694.94
Mobile	9.15	21.39	159.20	0.54	0.34	0.31	3.89
Total	17.10	27.84	169.17	0.54	0.36	0.33	7,698.83

Note:

1. Area source emissions were derived from Urbemis2007 - 1994 HPS Land Use Plan [NAVY 2000]

	1993 NAA Baseline Emissions TPY						
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}	CO ₂
Area	1.45	1.18	1.82	-	0.00	0.00	1,404.33
Mobile	1.67	3.90	29.05	0.10	0.06	0.06	0.71
Total	3.12	5.08	30.87	0.10	0.07	0.06	1,405.04

Table J-9A. Emission Source Data for Proposed Construction Equipment (Fulltime)

Activity/Equipment Type	Fuel Type	Hp Rating	Average Daily % of Full Throttle	Number Active	Hours/ Day	Total Work Days	Total Hp-Hrs
2010 Site Preparation							
Abatement							
Man Lifts	E/P	60	0.46	3	8	22	
Loader	D	164	0.54	1	8	22	15,587
Rough Terrain Forklift	D	104	0.53	1	8	22	9,701
Demolition							
Man Lifts	E/P	60	0.46	2	8	22	4,858
Off Road Dump Truck	D	60	0.46	1	8	22	4,858
Loader	D	164	0.54	1	8	22	15,587
Dozer	D	357	0.59	1	8	22	37,071
Water Trucks	D	479	0.57	2	8	22	48,053
Crane	D	399	0.43	1	8	22	30,196
2011 Site Preparation							
Demolition							
Man Lifts	E/P	60	0.46	2	8	22	
Excavators	D	291	0.75	2	8	22	38,412
Off Road Dump Truck	D	60	0.46	1	8	22	4,858
Loader	D	164	0.54	1	8	22	15,587
Dozer	D	357	0.59	1	8	22	37,071
Water Trucks	D	479	0.57	2	8	22	48,053
Crane	D	399	0.43	1	8	22	30,196
Grading and Infrastructure							
Excavators	D	291	0.75	3	8	22	38,412
Loader	D	164	0.54	2	8	22	15586.56
Bobcat	D	44	0.55	1	8	22	4259.2
Compactor	D	44	0.55	2	8	22	4259.2
Water Trucks	D	479	0.57	1	8	22	48,053
Scraper	D	313	0.72	1	8	22	39,663
Off Road Dump Truck	D	60	0.46	3	8	22	4,858
Dozer	D	357	0.59	1	8	22	37,071
2012 Site Preparation							
Abatement							
Man Lifts	E/P	60	0.46	6	8	22	
Loader	D	164	0.54	2	8	22	15,587
Rough Terrain Forklift	D	104	0.53	2	8	22	9,701
Demolition							
Man Lifts	E/P	60	0.46	4	8	22	
Excavators	D	291	0.75	4	8	22	38412
Off Road Dump Truck	D	60	0.46	2	8	22	4857.6
Loader	D	164	0.54	2	8	22	15586.56
Dozer	D	357	0.59	2	8	22	37070.88
Water Trucks	D	479	0.57	4	8	22	48053.28
Crane	D	399	0.43	2	8	22	30196.32
Grading and Infrastructure							
Excavators	D	291	0.75	4	8	22	38412
Loader	D	164	0.54	2	8	22	15586.56
Bobcat	D	44	0.55	2	8	22	4259.2
Compactor	D	44	0.55	2	8	22	4259.2
Water Trucks	D	479	0.57	2	8	22	48053.28
Off Road Dump Truck	D	60	0.46	2	8	22	4857.6
Dozer	D	357	0.59	1	8	22	37070.88

Table J-9A. Emission Source Data for Proposed Construction Equipment (Fulltime)

Activity/Equipment Type	Fuel Type	Hp Rating	Average Daily % of Full Throttle	Number Active	Hours/Day	Total Work Days	Total Hp-Hrs
2013 Site Preparation							
Demolition							
Man Lifts	E/P	60	0.46	4	8	22	
Excavators	D	291	0.75	4	8	22	38412
Off Road Dump Truck	D	60	0.46	2	8	22	4857.6
Loader	D	164	0.54	2	8	22	15586.56
Dozer	D	357	0.59	2	8	22	37070.88
Water Trucks	D	479	0.57	4	8	22	48053.28
Crane	D	399	0.43	2	8	22	30196.32
Grading and Infrastructure							
Excavators	D	291	0.75	6	8	22	38412
Loader	D	164	0.54	4	8	22	15586.56
Bobcat	D	44	0.55	2	8	22	4,259
Compactor	D	44	0.55	4	8	22	4,259
Water Trucks	D	479	0.57	3	8	22	48,053
Off Road Dump Truck	D	60	0.46	6	8	22	4,858
Scraper	D	313	0.72	2	8	22	39,663
Dozer	D	357	0.59	2	8	22	37,071
Foundation Piles/Structure/Rough In							
Excavators	D	291	0.75	1	8	22	38,412
Loader	D	164	0.54	1	8	22	15586.56
Water Trucks	D	479	0.57	1	8	22	48053.28
Crane	D	399	0.43	1	8	22	30196.32
Man Lifts	D	60	0.46	1	8	22	
Interior and Exterior Finishes							
Loader	D	164	0.54	1	8	22	15586.56
Man Lifts	E/P	60	0.46	1	8	22	
Sweeper	D	238	0.51	1	8	22	21362.88
Rough Terrain Forklift	D	104	0.53	1	8	22	9701.12
2014 Site Preparation							
Abatement							
Man Lifts	E/P	60	0.46	3	8	22	
Loader	D	164	0.54	1	8	22	15586.56
Rough Terrain Forklift	D	104	0.53	1	8	22	9701.12
Grading and Infrastructure							
Excavators	D	291	0.75	9	8	22	38412
Loader	D	164	0.54	5	8	22	15,587
Compactor	D	44	0.55	5	8	22	4259.2
Bobcat	D	44	0.55	4	8	22	4259.2
Water Trucks	D	479	0.57	4	8	22	48053.28
Off Road Dump Truck	D	60	0.46	6	8	22	4857.6
Scraper	D	313	0.72	1	8	22	39663.36
Dozers	D	357	0.59	3	8	22	37070.88
Foundation Piles/Structure/Rough In							
Excavators	D	291	0.75	1	8	22	38412
Loader	D	164	0.54	1	8	22	15586.56
Water Trucks	D	479	0.57	1	8	22	48053.28
Crane	D	399	0.43	1	8	22	30196.32
Man Lifts	E/P	60	0.46	1	8	22	
Interior and Exterior Finishes							
Loader	D	164	0.54	1	8	22	15586.56
Man Lifts	E/P	60	0.46	1	8	22	
Sweeper	D	238	0.51	1	8	22	21362.88
Rough Terrain Forklift	D	104	0.53	1	8	22	9701.12

Table J-9A. Emission Source Data for Proposed Construction Equipment (Fulltime)

Activity/Equipment Type	Fuel Type	Hp Rating	Average Daily % of Full Throttle	Number Active	Hours/Day	Total Work Days	Total Hp-Hrs
2015 Site Preparation							
Demolition							
Man Lifts	E/P	60	0.46	2	8	22	
Excavators	D	291	0.75	2	8	22	38412
Off Road Dump Truck	D	60	0.46	1	8	22	4857.6
Loader	D	164	0.54	1	8	22	15586.56
Dozer	D	357	0.59	1	8	22	37070.88
Water Trucks	D	479	0.57	2	8	22	48053.28
Crane	D	399	0.43	1	8	22	30196.32
Grading and Infrastructure							
Excavators	D	291	0.75	3	8	22	38,412
Loader	D	164	0.54	2	8	22	15586.56
Bobcat	D	44	0.55	2	8	22	4259.2
Compactor	D	44	0.55	2	8	22	4259.2
Water Trucks	D	479	0.57	2	8	22	48053.28
Off Road Dump Truck	D	60	0.46	2	8	22	4857.6
Dozer	D	357	0.59	1	8	22	37070.88
Foundation Piles/Structure/Rough In							
Excavators	D	291	0.75	3	8	22	38412
Loader	D	164	0.54	4	8	22	15586.56
Water Trucks	D	479	0.57	3	8	22	48053.28
Crane	D	399	0.43	5	8	22	30196.32
Man Lifts	E/P	60	0.46	3	8	22	
Interior and Exterior Finishes							
Loader	D	164	0.54	1	8	22	15586.56
Man Lifts	E/P	60	0.46	1	8	22	
Sweeper	D	238	0.51	1	8	22	21362.88
Rough Terrain Forklift	D	104	0.53	1	8	22	9701.12
2016 Site Preparation							
Demolition							
Man Lifts	E/P	291	0.75	2	8	22	
Excavators	D	164	0.54	1	8	22	15586.56
Off Road Dump Truck	D	44	0.55	1	8	22	4259.2
Loader	D	44	0.55	1	8	22	4259.2
Dozer	D	479	0.57	1	8	22	48,053
Water Trucks	D	60	0.46	1	8	22	4,858
Grading and Infrastructure							
Excavators	D	291	0.75	3	8	22	38,412
Loader	D	164	0.54	3	8	22	15,587
Bobcat	D	44	0.55	3	8	22	4,259
Compactor	D	44	0.55	3	8	22	4,259
Water Trucks	D	479	0.57	3	8	22	48,053
Off Road Dump Truck	D	60	0.46	3	8	22	4,858
Foundation Piles/Structure/Rough In							
Excavators	D	291	0.75	2	8	22	38412
Loader	D	164	0.54	2	8	22	15586.56
Water Trucks	D	479	0.57	2	8	22	48053.28
Crane	D	399	0.43	2	8	22	30196.32
Man Lifts	E/P	60	0.46	2	8	22	
Interior and Exterior Finishes							
Loader	D	164	0.54	5	8	22	15586.56
Man Lifts	E/P	60	0.46	6	8	22	
Sweeper	D	238	0.51	5	8	22	21362.88
Rough Terrain Forklift	D	104	0.53	7	8	22	9701.12
Crane	D	399	0.43	1	8	22	30196.32

Table J-9A. Emission Source Data for Proposed Construction Equipment (Fulltime)

<i>Activity/Equipment Type</i>	<i>Fuel Type</i>	<i>Hp Rating</i>	<i>Average Daily % of Full Throttle</i>	<i>Number Active</i>	<i>Hours/Day</i>	<i>Total Work Days</i>	<i>Total Hp-Hrs</i>
2017 Site Preparation							
Grading and Infrastructure							
Excavators	D	291	0.75	1	8	22	38412
Loader	D	164	0.54	1	8	22	15586.56
Bobcat	D	44	0.55	1	8	22	4259.2
Compactor	D	44	0.55	1	8	22	4259.2
Water Trucks	D	479	0.57	1	8	22	48053.28
Off Road Dump Truck	D	60	0.46	2	8	22	4857.6
Foundation Piles/Structure/Rough In							
Excavators	D	291	0.75	4	8	22	38412
Loader	D	164	0.54	4	8	22	15586.56
Water Trucks	D	479	0.57	4	8	22	48053.28
Crane	D	399	0.43	3	8	22	30,196
Man Lifts	E/P	60	0.46	4	8	22	
Interior and Exterior Finishes							
Loader	D	164	0.54	3	8	22	15,587
Man Lifts	E/P	60	0.46	3	8	22	
Sweeper	D	238	0.51	3	8	22	21362.88
Rough Terrain Forklift	D	104	0.53	3	8	22	9701.12
2018 Building Construction							
Man Lifts	E/P	60	0.46	4	8	22	
Sweeper	D	238	0.51	2	8	22	21362.88
Rough Terrain Forklift	D	104	0.53	2	8	22	9701.12
Loader	D	164	0.54	1	8	22	15586.56

Table J-9B. Activity Data - Construction Truck Traffic

	<i>Hauling Round Trips</i>	<i>Trip Length (miles)</i>	<i>Total Miles</i>	<i>Duration (years)</i>
Hauling Trips	362,306	14.6	5,289,668	2012-2032

Hauling Trips Information from pages Table 3-4 [Appendix A5]

Table J-9C. Construction Emissions for Truck Traffic

	Total Pounds						
	VOC	CO	NOx	SOx	PM	PM10	PM2.5
Total Project	110,231	227,457	346,064	405	20,341	18,356	13,832
Average Annual	5,512	11,373	17,303	20	1,017	918	692
Average Daily	21	43	66	0	4	3	3

The emission factors for Hauling Truck Trips were from CY2011.

Table J-10. Emission Factors for Diesel-Powered Construction Equipment - Years 2010 - 2018

Project Year 2010/Source Type	Emission Factors (Grams/Horsepower-Hour)							References
	VOC	CO	NO _x	SO _x	PM	PM ₁₀	PM _{2.5}	
Off-Road Equipment - <15 Hp	0.45	2.14	2.87	0.01	0.15	0.15	0.14	(1)
Off-Road Equipment - 16-24 Hp	0.49	1.52	2.76	0.00	0.16	0.16	0.14	(1)
Off-Road Equipment - 25-50 Hp	1.49	3.87	3.44	0.00	0.35	0.35	0.33	(1)
Off-Road Equipment - 51-120 Hp	0.66	2.36	4.05	0.00	0.36	0.36	0.33	(1)
Off-Road Equipment - 121-175 Hp	0.47	2.02	3.75	0.00	0.21	0.21	0.19	(1)
Off-Road Equipment - 176-250 Hp	0.34	0.97	3.60	0.00	0.13	0.13	0.12	(1)
Off-Road Equipment - 251-500 Hp	0.29	1.08	3.03	0.00	0.11	0.11	0.10	(1)
Off-Road Equipment - 501-750 Hp	0.31	1.18	3.25	0.00	0.12	0.12	0.11	(1)
Off-Road Equipment - >750 Hp	0.37	1.49	4.14	0.00	0.13	0.13	0.12	(1)
Project Year 2011/Source Type	Emission Factors (Grams/Horsepower-Hour)							References
	VOC	CO	NO _x	SO _x	PM	PM ₁₀	PM _{2.5}	
Off-Road Equipment - <15 Hp	0.45	2.13	2.84	0.01	0.15	0.15	0.13	(1)
Off-Road Equipment - 16-24 Hp	0.48	1.51	2.73	0.00	0.15	0.15	0.14	(1)
Off-Road Equipment - 25-50 Hp	1.39	3.78	3.35	0.00	0.33	0.33	0.31	(1)
Off-Road Equipment - 51-120 Hp	0.63	2.35	3.85	0.00	0.33	0.33	0.31	(1)
Off-Road Equipment - 121-175 Hp	0.45	2.01	3.53	0.00	0.20	0.20	0.18	(1)
Off-Road Equipment - 176-250 Hp	0.33	0.95	3.37	0.00	0.12	0.12	0.11	(1)
Off-Road Equipment - 251-500 Hp	0.28	1.05	2.85	0.00	0.10	0.10	0.10	(1)
Off-Road Equipment - 501-750 Hp	0.30	1.13	3.05	0.00	0.11	0.11	0.10	(1)
Off-Road Equipment - >750 Hp	0.35	1.43	3.96	0.00	0.12	0.12	0.11	(1)
Project Year 2012/Source Type	Emission Factors (Grams/Horsepower-Hour)							References
	VOC	CO	NO _x	SO _x	PM	PM ₁₀	PM _{2.5}	
Off-Road Equipment - <15 Hp	0.44	2.13	2.80	0.01	0.14	0.14	0.13	(1)
Off-Road Equipment - 16-24 Hp	0.47	1.49	2.71	0.00	0.15	0.15	0.13	(1)
Off-Road Equipment - 25-50 Hp	1.30	3.69	3.25	0.00	0.31	0.31	0.29	(1)
Off-Road Equipment - 51-120 Hp	0.59	2.33	3.64	0.00	0.31	0.31	0.29	(1)
Off-Road Equipment - 121-175 Hp	0.43	2.01	3.32	0.00	0.19	0.19	0.17	(1)
Off-Road Equipment - 176-250 Hp	0.31	0.93	3.15	0.00	0.11	0.11	0.10	(1)
Off-Road Equipment - 251-500 Hp	0.27	1.01	2.66	0.00	0.10	0.10	0.09	(1)
Off-Road Equipment - 501-750 Hp	0.29	1.09	2.85	0.00	0.10	0.10	0.10	(1)
Off-Road Equipment - >750 Hp	0.34	1.36	3.78	0.00	0.12	0.12	0.11	(1)
Project Year 2013/Source Type	Emission Factors (Grams/Horsepower-Hour)							References
	VOC	CO	NO _x	SO _x	PM	PM ₁₀	PM _{2.5}	
Off-Road Equipment - <15 Hp	0.43	2.12	2.77	0.01	0.14	0.14	0.13	(1)
Off-Road Equipment - 16-24 Hp	0.46	1.48	2.69	0.00	0.14	0.14	0.13	(1)
Off-Road Equipment - 25-50 Hp	1.21	3.60	3.16	0.00	0.29	0.29	0.27	(1)
Off-Road Equipment - 51-120 Hp	0.55	2.31	3.44	0.00	0.29	0.29	0.27	(1)
Off-Road Equipment - 121-175 Hp	0.40	2.00	3.10	0.00	0.17	0.17	0.16	(1)
Off-Road Equipment - 176-250 Hp	0.30	0.90	2.93	0.00	0.10	0.10	0.10	(1)
Off-Road Equipment - 251-500 Hp	0.26	0.97	2.47	0.00	0.09	0.09	0.08	(1)
Off-Road Equipment - 501-750 Hp	0.27	1.05	2.66	0.00	0.10	0.10	0.09	(1)
Off-Road Equipment - >750 Hp	0.32	1.30	3.60	0.00	0.11	0.11	0.10	(1)

Project Year 2014/Source Type	Emission Factors (Grams/Horsepower-Hour)							References
	VOC	CO	NOx	SOx	PM	PM10	PM2.5	
Off-Road Equipment - <15 Hp	0.43	2.11	2.73	0.01	0.13	0.13	0.12	(1)
Off-Road Equipment - 16-24 Hp	0.46	1.46	2.66	0.00	0.13	0.13	0.12	(1)
Off-Road Equipment - 25-50 Hp	1.12	3.51	3.07	0.00	0.27	0.27	0.24	(1)
Off-Road Equipment - 51-120 Hp	0.52	2.30	3.23	0.00	0.27	0.27	0.24	(1)
Off-Road Equipment - 121-175 Hp	0.38	2.00	2.88	0.00	0.16	0.16	0.15	(1)
Off-Road Equipment - 176-250 Hp	0.28	0.88	2.71	0.00	0.10	0.10	0.09	(1)
Off-Road Equipment - 251-500 Hp	0.24	0.93	2.28	0.00	0.08	0.08	0.08	(1)
Off-Road Equipment - 501-750 Hp	0.26	1.01	2.46	0.00	0.09	0.09	0.08	(1)
Off-Road Equipment - >750 Hp	0.31	1.23	3.43	0.00	0.10	0.10	0.09	(1)
Project Year 2015/Source Type	Emission Factors (Grams/Horsepower-Hour)							References
	VOC	CO	NOx	SOx	PM	PM10	PM2.5	
Off-Road Equipment - <15 Hp	0.42	2.10	2.69	0.01	0.13	0.13	0.12	(1)
Off-Road Equipment - 16-24 Hp	0.45	1.44	2.64	0.00	0.13	0.13	0.12	(1)
Off-Road Equipment - 25-50 Hp	1.03	3.42	2.97	0.00	0.24	0.24	0.22	(1)
Off-Road Equipment - 51-120 Hp	0.48	2.28	3.03	0.00	0.24	0.24	0.22	(1)
Off-Road Equipment - 121-175 Hp	0.36	1.99	2.67	0.00	0.15	0.15	0.14	(1)
Off-Road Equipment - 176-250 Hp	0.27	0.85	2.49	0.00	0.09	0.09	0.08	(1)
Off-Road Equipment - 251-500 Hp	0.23	0.90	2.10	0.00	0.08	0.08	0.07	(1)
Off-Road Equipment - 501-750 Hp	0.25	0.97	2.27	0.00	0.08	0.08	0.08	(1)
Off-Road Equipment - >750 Hp	0.29	1.17	3.25	0.00	0.10	0.10	0.09	(1)
Project Year 2016/Source Type	Emission Factors (Grams/Horsepower-Hour)							References
	VOC	CO	NOx	SOx	PM	PM10	PM2.5	
Off-Road Equipment - <15 Hp	0.42	2.09	2.66	0.01	0.12	0.12	0.11	(1)
Off-Road Equipment - 16-24 Hp	0.44	1.43	2.62	0.00	0.12	0.12	0.11	(1)
Off-Road Equipment - 25-50 Hp	0.94	3.34	2.88	0.00	0.22	0.22	0.20	(1)
Off-Road Equipment - 51-120 Hp	0.44	2.26	2.82	0.00	0.22	0.22	0.20	(1)
Off-Road Equipment - 121-175 Hp	0.33	1.99	2.45	0.00	0.13	0.13	0.12	(1)
Off-Road Equipment - 176-250 Hp	0.25	0.83	2.27	0.00	0.08	0.08	0.07	(1)
Off-Road Equipment - 251-500 Hp	0.22	0.86	1.91	0.00	0.07	0.07	0.06	(1)
Off-Road Equipment - 501-750 Hp	0.24	0.93	2.07	0.00	0.07	0.07	0.07	(1)
Off-Road Equipment - >750 Hp	0.27	1.10	3.07	0.00	0.09	0.09	0.08	(1)
Project Year 2017/Source Type	Emission Factors (Grams/Horsepower-Hour)							References
	VOC	CO	NOx	SOx	PM	PM10	PM2.5	
Off-Road Equipment - <15 Hp	0.41	2.09	2.62	0.01	0.12	0.12	0.11	(1)
Off-Road Equipment - 16-24 Hp	0.43	1.41	2.60	0.00	0.12	0.12	0.11	(1)
Off-Road Equipment - 25-50 Hp	0.85	3.25	2.78	0.00	0.20	0.20	0.18	(1)
Off-Road Equipment - 51-120 Hp	0.41	2.24	2.62	0.00	0.20	0.20	0.18	(1)
Off-Road Equipment - 121-175 Hp	0.31	1.98	2.23	0.00	0.12	0.12	0.11	(1)
Off-Road Equipment - 176-250 Hp	0.24	0.81	2.05	0.00	0.07	0.07	0.07	(1)
Off-Road Equipment - 251-500 Hp	0.21	0.82	1.72	0.00	0.06	0.06	0.06	(1)
Off-Road Equipment - 501-750 Hp	0.22	0.89	1.87	0.00	0.07	0.07	0.06	(1)
Off-Road Equipment - >750 Hp	0.26	1.04	2.89	0.00	0.08	0.08	0.07	(1)
Project Year 2018/Source Type	Emission Factors (Grams/Horsepower-Hour)							References
	VOC	CO	NOx	SOx	PM	PM10	PM2.5	
Off-Road Equipment - <15 Hp	0.40	2.08	2.59	0.01	0.12	0.12	0.11	(1)
Off-Road Equipment - 16-24 Hp	0.42	1.40	2.57	0.00	0.11	0.11	0.10	(1)
Off-Road Equipment - 25-50 Hp	0.76	3.16	2.69	0.00	0.18	0.18	0.16	(1)
Off-Road Equipment - 51-120 Hp	0.37	2.23	2.41	0.00	0.18	0.18	0.16	(1)
Off-Road Equipment - 121-175 Hp	0.29	1.98	2.01	0.00	0.11	0.11	0.10	(1)
Off-Road Equipment - 176-250 Hp	0.22	0.78	1.83	0.00	0.06	0.06	0.06	(1)
Off-Road Equipment - 251-500 Hp	0.20	0.78	1.53	0.00	0.06	0.06	0.05	(1)
Off-Road Equipment - 501-750 Hp	0.21	0.85	1.68	0.00	0.06	0.06	0.06	(1)
Off-Road Equipment - >750 Hp	0.24	0.97	2.71	0.00	0.07	0.07	0.07	(1)

Notes: (1) Composites developed from Offroad emission factors obtained from URBEMIS 2007 for the Year 2010 & 2020 and interpolated for intermediate years

Table J-11. Yearly Composite Emission Factors for On-Road Equipment - Years 2010 - 2018

Project Year	Emission Factors (Grams/Mile)							References
	VOC	CO	NOx	SOx	PM	PM10	PM2.5	
2010	9.42	20.77	31.79	0.04	1.89	1.70	1.29	(1)
2011	9.45	19.50	29.68	0.03	1.74	1.57	1.19	(1)
2012	9.49	18.24	27.56	0.03	1.60	1.45	1.09	(1)
2013	9.53	16.98	25.44	0.03	1.45	1.32	0.99	(1)
2014	9.56	15.72	23.33	0.03	1.30	1.19	0.89	(1)
2015	9.60	14.45	21.21	0.03	1.16	1.06	0.79	(1)
2016	9.64	13.19	19.09	0.03	1.01	0.93	0.69	(1)
2017	9.67	11.93	16.98	0.03	0.86	0.80	0.59	(1)
2018	9.71	10.66	14.86	0.03	0.71	0.68	0.49	(1)

Note: (1) Heavy duty diesel truck running emission factors developed from EMFAC2007 (CARB 2006b). Units in gms/mile interpolated with 2010 and 2020 years for the project years
 For on-road trucks, composite emission factors developed from EMFAC 2007 based on a round trip of 75% at 55 mph, 20% at 25 mph, and 5% at 5 mph.
 Units in grams/mile. Although not shown in these calculations, emissions from 5 minutes of idling mode included for each truck round trip.

Table J-12. Total Construction Emissions associated with the Proposed Action

Activity/Equipment Type	VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}
	<i>Total Pounds</i>						
2010 Site Preparation							
Abatement							
Man Lifts	-	-	-	-	-	-	-
Loader	16.21	69.39	128.90	0.14	7.25	7.25	6.67
Rough Terrain Forklift	14.15	50.52	86.65	0.08	7.63	7.63	7.02
Demolition							
Man Lifts	7.08	25.30	43.39	0.04	3.82	3.82	3.52
Off Road Dump Truck	7.08	25.30	43.39	0.04	3.82	3.82	3.52
Loader	16.21	69.39	128.90	0.14	7.25	7.25	6.67
Dozer	23.76	88.48	247.87	0.26	9.07	9.07	8.35
Water Trucks	30.80	114.70	321.30	0.34	11.76	11.76	10.82
Crane	19.36	72.08	201.90	0.21	7.39	7.39	6.80
Subtotal	134.7	515.2	1,202.3	1.3	58.0	58.0	53.4
2011 Site Preparation							
Demolition							
Man Lifts	-	-	-	-	-	-	-
Excavators	23.63	88.52	240.95	0.27	8.81	8.81	8.11
Off Road Dump Truck	6.69	25.12	41.19	0.04	3.58	3.58	3.29
Loader	15.42	69.22	121.44	0.14	6.81	6.81	6.27
Dozer	22.81	85.43	232.54	0.26	8.50	8.50	7.82
Water Trucks	34.60	100.59	357.48	0.42	12.84	12.84	11.81
Crane	18.58	69.58	189.42	0.21	6.93	6.93	6.37
Grading and Infrastructure							
Excavators	23.63	88.52	240.95	0.27	8.81	8.81	8.11
Loader	15.42	69.22	121.44	0.14	6.81	6.81	6.27
Bobcat	13.09	35.49	31.45	0.04	3.12	3.12	2.87
Compactor	13.09	35.49	31.45	0.04	3.12	3.12	2.87
Water Trucks	29.56	110.73	301.43	0.34	11.02	11.02	10.14
Scraper	24.40	91.40	248.80	0.28	9.10	9.10	8.37
Off Road Dump Truck	6.69	25.12	41.19	0.04	3.58	3.58	3.29
Dozer	22.81	85.43	232.54	0.26	8.50	8.50	7.82
Subtotal	270.4	979.9	2,432.3	2.8	101.5	101.5	93.4

Table J-12. Total Construction Emissions associated with the Proposed Action (continued)

Activity/Equipment Type	VOC	CO	NO _x	SO _x	PM	PM ₁₀	PM _{2.5}
	Total Pounds						
2012 Site Preparation							
Abatement							
Man Lifts	-	-	-	-	-	-	-
Loader	14.62	69.05	113.97	0.14	6.37	6.37	5.86
Rough Terrain Forklift	12.59	49.80	77.89	0.08	6.66	6.66	6.13
Demolition							
Man Lifts	-	-	-	-	-	-	-
Excavators	22.64	85.35	225.08	0.27	8.22	8.22	7.56
Off Road Dump Truck	6.30	24.94	39.00	0.04	3.34	3.34	3.07
Loader	14.62	69.05	113.97	0.14	6.37	6.37	5.86
Dozer	21.85	82.37	217.22	0.26	7.93	7.93	7.30
Water Trucks	28.32	106.77	281.57	0.34	10.28	10.28	9.46
Crane	17.80	67.09	176.94	0.21	6.46	6.46	5.94
Grading and Infrastructure							
Excavators	22.64	85.35	225.08	0.27	8.22	8.22	7.56
Loader	14.62	69.05	113.97	0.14	6.37	6.37	5.86
Bobcat	12.24	34.65	30.56	0.04	2.91	2.91	2.68
Compactor	12.24	34.65	30.56	0.04	2.91	2.91	2.68
Water Trucks	28.32	106.77	281.57	0.34	10.28	10.28	9.46
Off Road Dump Truck	6.30	24.94	39.00	0.04	3.34	3.34	3.07
Dozer	21.85	82.37	217.22	0.26	7.93	7.93	7.30
Subtotal	256.9	992.2	2,183.6	2.6	97.6	97.6	89.8
2013 Site Preparation							
Demolition							
Man Lifts	-	-	-	-	-	-	-
Excavators	21.64	82.18	209.20	0.27	7.63	7.63	7.02
Off Road Dump Truck	5.92	24.76	36.81	0.04	3.09	3.09	2.85
Loader	13.83	68.88	106.51	0.14	5.93	5.93	5.46
Dozer	20.89	79.31	201.89	0.26	7.36	7.36	6.77
Water Trucks	27.08	102.81	261.70	0.34	9.55	9.55	8.78
Crane	17.01	64.60	164.45	0.21	6.00	6.00	5.52
Grading and Infrastructure							
Excavators	21.64	82.18	209.20	0.27	7.63	7.63	7.02
Loader	13.83	68.88	106.51	0.14	5.93	5.93	5.46
Bobcat	11.38	33.82	29.68	0.04	2.71	2.71	2.49
Compactor	11.38	33.82	29.68	0.04	2.71	2.71	2.49
Water Trucks	27.08	102.81	261.70	0.34	9.55	9.55	8.78
Off Road Dump Truck	5.92	24.76	36.81	0.04	3.09	3.09	2.85
Scraper	22.35	84.86	216.01	0.28	7.88	7.88	7.25
Dozer	20.89	79.31	201.89	0.26	7.36	7.36	6.77
Foundation Piles/Structure/Rough In							
Excavators	21.64	82.18	209.20	0.27	7.63	7.63	7.02
Loader	13.83	68.88	106.51	0.14	5.93	5.93	5.46
Water Trucks	27.08	102.81	261.70	0.34	9.55	9.55	8.78
Crane	17.01	64.60	164.45	0.21	6.00	6.00	5.52
Man Lifts	-	-	-	-	-	-	-
Interior and Exterior Finishes							
Loader	13.83	68.88	106.51	0.14	5.93	5.93	5.46
Man Lifts	-	-	-	-	-	-	-
Sweeper	13.98	42.46	138.08	0.19	4.94	4.94	4.54
Rough Terrain Forklift	11.81	49.44	73.51	0.08	6.18	6.18	5.69
Subtotal	360.0	1,412.2	3,132.0	4.1	132.6	132.6	122.0

Table J-12. Total Construction Emissions associated with the Proposed Action (continued)

Activity/Equipment Type	VOC	CO	NO _x	SO _x	PM	PM ₁₀	PM _{2.5}
	Total Pounds						
2014 Site Preparation							
Abatement							
Man Lifts	-	-	-	-	-	-	-
Loader	13.04	68.71	99.05	0.14	5.49	5.49	5.05
Rough Terrain Forklift	11.04	49.08	69.14	0.08	5.70	5.70	5.24
Grading and Infrastructure							
Excavators	20.65	79.01	193.32	0.27	7.04	7.04	6.48
Loader	13.04	68.71	99.05	0.14	5.49	5.49	5.05
Compactor	10.52	32.98	28.79	0.04	2.50	2.50	2.30
Bobcat	10.52	32.98	28.79	0.04	2.50	2.50	2.30
Water Trucks	25.83	98.84	241.84	0.34	8.81	8.81	8.10
Off Road Dump Truck	5.53	24.58	34.62	0.04	2.85	2.85	2.62
Scraper	21.32	81.59	199.61	0.28	7.27	7.27	6.69
Dozers	19.93	76.25	186.57	0.26	6.79	6.79	6.25
Foundation Piles/Structure/Rough In							
Excavators	20.65	79.01	193.32	0.27	7.04	7.04	6.48
Loader	13.04	68.71	99.05	0.14	5.49	5.49	5.05
Water Trucks	25.83	98.84	241.84	0.34	8.81	8.81	8.10
Crane	16.23	62.11	151.97	0.21	5.53	5.53	5.09
Man Lifts	-	-	-	-	-	-	-
Interior and Exterior Finishes							
Loader	13.04	68.71	99.05	0.14	5.49	5.49	5.05
Man Lifts	-	-	-	-	-	-	-
Sweeper	13.28	41.33	127.66	0.19	4.55	4.55	4.19
Rough Terrain Forklift	11.04	49.08	69.14	0.08	5.70	5.70	5.24
Subtotal	264.5	1,080.5	2,162.8	3.0	97.0	97.0	89.3
2015 Site Preparation							
Demolition							
Man Lifts	-	-	-	-	-	-	-
Excavators	19.66	75.84	177.44	0.27	6.45	6.45	5.93
Off Road Dump Truck	5.14	24.40	32.43	0.04	2.61	2.61	2.40
Loader	12.24	68.54	91.59	0.14	5.05	5.05	4.65
Dozer	18.97	73.20	171.24	0.26	6.23	6.23	5.73
Water Trucks	24.59	94.88	221.97	0.34	8.07	8.07	7.42
Crane	15.45	59.62	139.49	0.21	5.07	5.07	4.67
Grading and Infrastructure							
Excavators	19.66	75.84	177.44	0.27	6.45	6.45	5.93
Loader	12.24	68.54	91.59	0.14	5.05	5.05	4.65
Bobcat	9.66	32.15	27.91	0.04	2.29	2.29	2.11
Compactor	9.66	32.15	27.91	0.04	2.29	2.29	2.11
Water Trucks	24.59	94.88	221.97	0.34	8.07	8.07	7.42
Off Road Dump Truck	5.14	24.40	32.43	0.04	2.61	2.61	2.40
Dozer	18.97	73.20	171.24	0.26	6.23	6.23	5.73
Foundation Piles/Structure/Rough In							
Excavators	19.66	75.84	177.44	0.27	6.45	6.45	5.93
Loader	12.24	68.54	91.59	0.14	5.05	5.05	4.65
Water Trucks	24.59	94.88	221.97	0.34	8.07	8.07	7.42
Crane	15.45	59.62	139.49	0.21	5.07	5.07	4.67
Man Lifts	-	-	-	-	-	-	-
Interior and Exterior Finishes							
Loader	12.24	68.54	91.59	0.14	5.05	5.05	4.65
Man Lifts	-	-	-	-	-	-	-
Sweeper	12.58	40.20	117.23	0.19	4.17	4.17	3.84
Rough Terrain Forklift	10.26	48.72	64.76	0.08	5.21	5.21	4.79
Subtotal	303.0	1,254.0	2,488.7	3.8	105.5	105.5	97.1

Table J-12. Total Construction Emissions associated with the Proposed Action (continued)

Activity/Equipment Type	VOC	CO	NO _x	SO _x	PM	PM ₁₀	PM _{2.5}
	Total Pounds						
2016 Site Preparation							
Demolition							
Man Lifts	-	-	-	-	-	-	-
Excavators	11.45	68.36	84.13	0.14	4.61	4.61	4.24
Off Road Dump Truck	8.81	31.32	27.02	0.04	2.08	2.08	1.92
Loader	8.81	31.32	27.02	0.04	2.08	2.08	1.92
Dozer	23.35	90.92	202.11	0.34	7.33	7.33	6.75
Water Trucks	4.75	24.22	30.23	0.04	2.37	2.37	2.18
Grading and Infrastructure							
Excavators	18.66	72.68	161.56	0.27	5.86	5.86	5.39
Loader	11.45	68.36	84.13	0.14	4.61	4.61	4.24
Bobcat	8.81	31.32	27.02	0.04	2.08	2.08	1.92
Compactor	8.81	31.32	27.02	0.04	2.08	2.08	1.92
Water Trucks	23.35	90.92	202.11	0.34	7.33	7.33	6.75
Off Road Dump Truck	4.75	24.22	30.23	0.04	2.37	2.37	2.18
Foundation Piles/Structure/Rough In							
Excavators	18.66	72.68	161.56	0.27	5.86	5.86	5.39
Loader	11.45	68.36	84.13	0.14	4.61	4.61	4.24
Water Trucks	23.35	90.92	202.11	0.34	7.33	7.33	6.75
Crane	14.67	57.13	127.00	0.21	4.61	4.61	4.24
Man Lifts	-	-	-	-	-	-	-
Interior and Exterior Finishes							
Loader	11.45	68.36	84.13	0.14	4.61	4.61	4.24
Man Lifts	-	-	-	-	-	-	-
Sweeper	11.88	39.07	106.81	0.19	3.78	3.78	3.48
Rough Terrain Forklift	9.48	48.36	60.38	0.08	4.73	4.73	4.35
Crane	14.67	57.13	127.00	0.21	4.61	4.61	4.24
Subtotal	229.9	994.3	1,694.1	2.8	77.1	77.1	70.9

Table J-12. Total Construction Emissions associated with the Proposed Action (continued)

Activity/Equipment Type	VOC	CO	NO _x	SO _x	PM	PM ₁₀	PM _{2.5}
	Total Pounds						
2017 Site Preparation							
Grading and Infrastructure							
Excavators	17.67	69.51	145.68	0.27	5.27	5.27	4.85
Loader	10.65	68.19	76.67	0.14	4.17	4.17	3.83
Bobcat	7.95	30.48	26.14	0.04	1.87	1.87	1.72
Compactor	7.95	30.48	26.14	0.04	1.87	1.87	1.72
Water Trucks	22.10	86.95	182.24	0.34	6.59	6.59	6.07
Off Road Dump Truck	4.36	24.04	28.04	0.04	2.12	2.12	1.95
Foundation Piles/Structure/Rough In							
Excavators	20.10	68.22	173.32	0.34	6.11	6.11	5.62
Loader	10.65	68.19	76.67	0.14	4.17	4.17	3.83
Water Trucks	22.10	86.95	182.24	0.34	6.59	6.59	6.07
Crane	13.89	54.64	114.52	0.21	4.14	4.14	3.81
Man Lifts	-	-	-	-	-	-	-
Interior and Exterior Finishes							
Loader	10.65	68.19	76.67	0.14	4.17	4.17	3.83
Man Lifts	-	-	-	-	-	-	-
Sweeper	9.83	38.66	81.02	0.15	2.93	2.93	2.70
Rough Terrain Forklift	8.70	48.00	56.00	0.08	4.24	4.24	3.90
Subtotal	166.6	742.5	1,245.3	2.3	54.3	54.3	49.9
2018 Building Construction							
Man Lifts	-	-	-	-	-	-	-
Sweeper	10.48	36.81	85.97	0.19	3.01	3.01	2.77
Rough Terrain Forklift	7.92	47.65	51.63	0.08	3.76	3.76	3.46
Loader	9.86	68.02	69.21	0.14	3.73	3.73	3.43
Subtotal	28.3	152.5	206.8	0.4	10.5	10.5	9.7
Combined (pounds)	2014	8123	16748	23	734	734	675
Combined Daily Emissions (lbs/day)	92	369	761	1	33	33	31
Average Daily Emissions (lbs/day)	10	41	85	0	4	4	3
	VOC	CO	NO _x	SO _x	PM	PM ₁₀	PM _{2.5}

Table J-13. Emission Source Data for Proposed Construction Activities [Part Time]

Activity/Equipment Type	Fuel Type	Hp Rating	Average Daily % of Full Throttle	Number Active	Hours/Day	Total Work Days	Total Hp-Hrs
Off-Road Equipment							
2010 Site Preparation							
Water Truck		429	0.57	1	4	22	21,519
Demolition							
2011 Site Preparation							
Demolition							
Grading and Infrastructure							
2012 Site Preparation							
Abatement							
Water Truck		429	0.57	2	4	22	43,037
Demolition							
Grading and Infrastructure							
2013 Site Preparation							
Demolition							
Grading and Infrastructure							
Foundation Piles/Structure/Rough In							
Interior and Exterior Finishes							
2014 Site Preparation							
Abatement							
Water Truck		429	0.57	1	4	22	21,519
Grading and Infrastructure							
Foundation Piles/Structure/Rough In							
Interior and Exterior Finishes							
2015 Site Preparation							
Demolition							
Man Lifts		60	0.46	2	4	22	
Loader		164	0.54	1	4	22	7,793
Rough Terrain Fork Lift		93	0.6	1	4	22	4,910
Grading and Infrastructure							
Foundation Piles/Structure/Rough In							
Interior and Exterior Finishes							
2016 Site Preparation							
Demolition							
Crane		399	0.43	1	4	22	15,098
Grading and Infrastructure							
Foundation Piles/Structure/Rough In							
Interior and Exterior Finishes							
2017 Site Preparation							
Grading and Infrastructure							
Foundation Piles/Structure/Rough In							
Interior and Exterior Finishes							
2018 Building Construction							
Off Road Dump Truck		479	0.57	1	4	22	24,027
Loader		164	0.54	1	4	22	7,793

Note:

It should be assumed that all Man Lifts referenced in the "Construction Equipment" columns will be propane or electric powered.

Max. number of round trips to be performed by 1 haul truck is 4 which = 8 total trips

Each truck will be able to carry 20 tons of material

Table J-14. HPS Construction Activity by Year Emissions [Half-Time]

Activity/Equipment Type	VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}
	Total Pounds						
Off-Road Equipment							
2010 Site Preparation							
Water Truck	13.79	51.36	143.88	0.15	5.27	5.27	4.84
Demolition							
2011 Site Preparation							
Demolition							
Grading and Infrastructure							
2012 Site Preparation							
Abatement							
Water Truck	25.36	95.63	252.18	0.31	9.21	9.21	8.47
Demolition							
Grading and Infrastructure							
2013 Site Preparation							
Demolition							
Grading and Infrastructure							
Foundation Piles/Structure/Rough In							
Interior and Exterior Finishes							
2014 Site Preparation							
Abatement							
Water Truck	11.57	44.26	108.30	0.15	3.94	3.94	3.63
Grading and Infrastructure							
Foundation Piles/Structure/Rough In							
Interior and Exterior Finishes							
2015 Site Preparation							
Demolition							
Man Lifts							
Loader	16.90	94.62	126.45	0.19	6.97	6.97	6.41
Rough Terrain Fork Lift	5.19	24.66	32.78	0.04	2.64	2.64	2.43
Subtotal	22.09	119.28	159.23	0.23	9.61	9.61	8.84
Grading and Infrastructure							
Foundation Piles/Structure/Rough In							
Interior and Exterior Finishes							
2016 Site Preparation							
Demolition							
Crane	7.34	28.57	63.50	0.11	2.30	2.30	2.12
Grading and Infrastructure							
Foundation Piles/Structure/Rough In							
Interior and Exterior Finishes							
2017 Site Preparation							
Grading and Infrastructure							
Foundation Piles/Structure/Rough In							
Interior and Exterior Finishes							
2018 Building Construction							
Off Road Dump Truck	10.43	41.50	81.19	0.17	2.93	2.93	2.69
Loader	4.93	34.01	34.60	0.07	1.86	1.86	1.71
Subtotal	15.36	75.51	115.79	0.24	4.79	4.79	4.41
Combined	95.5	414.6	842.9	1.2	35.1	35.1	32.3
Combined Daily Emissions	4.3	18.8	38.3	0.1	1.6	1.6	1.5
Average Daily Emissions	0.7	3.1	6.4	0.0	0.3	0.3	0.2

Table J-15. Emission Source Data for Proposed Construction Activities [Part Time]

Activity/Equipment Type	Fuel Type	Hp Rating	Average Daily % of Full Throttle	Number Active	Hours/Day	Total Work Days	Total Hp-Hrs
Off-Road Equipment							
2010 Site Preparation							
2011 Site Preparation							
Demolition							
Barge	D	1000	0.51	1	2	22	22,440
2012 Site Preparation							
Grading and Infrastructure							
Grader	D	174	0.61	2	2	22	4,670
Asphalt Layer	D	100	0.62	2	2	22	2,728
Soil Stabilizer	D	238	0.51	2	2	22	5,341
Roller	D	104	0.53	2	2	22	2,425
Dozers	D	357	0.59	2	2	22	9,268
Barge	D	1000	0.51	1	2	22	22,440
2013 Site Preparation							
Grading and Infrastructure							
Grader	D	174	0.61	1	2	22	4,670
Asphalt Layer	D	100	0.62	1	2	22	2,728
Soil Stabilizer	D	238	0.51	1	2	22	5,341
Roller	D	104	0.53	1	2	22	2,425
Dozers	D	357	0.59	1	2	22	9,268
Barge	D	1000	0.51	2	2	22	22,440
2014 Site Preparation							
Grading and Infrastructure							
Grader	D	174	0.61	4	2	22	4670.16
Asphalt Layer	D	100	0.62	4	2	22	2,728
Soil Stabilizer	D	238	0.51	4	2	22	5340.72
Roller	D	104	0.53	4	2	22	2425.28
Dozers	D	357	0.59	4	2	22	9267.72
Barge	D	1000	0.51	1	2	22	22440
2015 Site Preparation							
Demolition							
Water Trucks	D	479	0.57	1	2	22	12,013
Grading and Infrastructure							
Grader	D	174	0.61	2	2	22	4,670
Asphalt Layer	D	100	0.62	2	2	22	2,728
Soil Stabilizer	D	238	0.51	2	2	22	5,341
Roller	D	104	0.53	2	2	22	2,425
Dozers	D	357	0.59	2	2	22	9,268
Barge	D	1000	0.51	1	2	22	22,440
2016 Site Preparation							
Grading and Infrastructure							
Grader	D	174	0.61	3	2	22	4,670
Asphalt Layer	D	100	0.62	3	2	22	2,728
Soil Stabilizer	D	238	0.51	3	2	22	5,341
Roller	D	104	0.53	3	2	22	2,425
Dozers	D	357	0.59	3	2	22	9,268
2017 Site Preparation							
Grading and Infrastructure							
Grader	D	174	0.61	1	2	22	4,670
Asphalt Layer	D	100	0.62	1	2	22	2,728
Soil Stabilizer	D	238	0.51	1	2	22	5,341
Roller	D	104	0.53	1	2	22	2,425
Dozers	D	357	0.59	1	2	22	9,268
2018 Building Construction							
Onsite Field Trucks	D	479	0.57	1	2	22	12,013

Note:

It should be assumed that all Man Lifts referenced in the "Construction Equipment" columns will be propane or electric powered.

Max. number of round trips to be performed by 1 haul truck is 4 which = 8 total trips

Each truck will be able to carry 20 tons of material

Table J-16. Total Emissions associated with the Proposed Action [Part Time]

Activity/Equipment Type	VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}
	Total Pounds						
Off-Road Equipment							
2010 Site Preparation							
2011 Site Preparation							
Demolition							
Barge	17.44	70.63	196.05	0.17	6.12	6.12	5.63
Subtotal	17.44	70.63	196.05	0.17	6.12	6.12	5.63
2012 Site Preparation							
Grading and Infrastructure							
Grader	4.38	20.69	34.15	0.04	1.91	1.91	1.76
Asphalt Layer	3.54	14.00	21.90	0.02	1.87	1.87	1.72
Soil Stabilizer	3.67	10.90	37.12	0.05	1.33	1.33	1.22
Roller	3.15	12.45	19.47	0.02	1.67	1.67	1.53
Dozers	5.46	20.59	54.30	0.07	1.98	1.98	1.82
Barge	16.65	67.41	187.19	0.17	5.77	5.77	5.30
Subtotal	36.86	146.04	354.14	0.36	14.53	14.53	13.37
2013 Site Preparation							
Grading and Infrastructure							
Grader	4.14	20.64	31.91	0.04	1.78	1.78	1.63
Asphalt Layer	3.32	13.90	20.67	0.02	1.74	1.74	1.60
Soil Stabilizer	3.50	10.61	34.52	0.05	1.23	1.23	1.14
Roller	2.95	12.36	18.38	0.02	1.54	1.54	1.42
Dozers	5.22	19.83	50.47	0.07	1.84	1.84	1.69
Barge	15.87	64.19	178.32	0.17	5.42	5.42	4.98
Subtotal	35.01	141.54	334.28	0.36	13.55	13.55	12.47
2014 Site Preparation							
Grading and Infrastructure							
Grader	3.91	20.59	29.68	0.04	1.64	1.64	1.51
Asphalt Layer	3.10	13.80	19.44	0.02	1.60	1.60	1.47
Soil Stabilizer	2.87	10.99	26.88	0.04	0.98	0.98	0.90
Roller	2.76	12.27	17.28	0.02	1.42	1.42	1.31
Dozers	4.98	19.06	46.64	0.07	1.70	1.70	1.56
Barge	15.09	60.98	169.46	0.17	5.06	5.06	4.66
Subtotal	32.71	137.69	309.38	0.36	12.41	12.41	11.42
2015 Site Preparation							
Demolition							
Water Trucks	6.15	23.72	55.49	0.09	2.02	2.02	1.86
Grading and Infrastructure							
Grader	3.67	20.54	27.44	0.04	1.51	1.51	1.39
Asphalt Layer	2.88	13.70	18.21	0.02	1.47	1.47	1.35
Soil Stabilizer	3.15	10.05	29.31	0.05	1.04	1.04	0.96
Roller	2.56	12.18	16.19	0.02	1.30	1.30	1.20
Dozers	4.74	18.30	42.81	0.07	1.56	1.56	1.43
Barge	14.31	57.76	160.59	0.17	4.71	4.71	4.34
Subtotal	37.46	156.25	350.05	0.45	13.61	13.61	12.52
2016 Site Preparation							
Grading and Infrastructure							
Grader	3.43	20.48	25.21	0.04	1.38	1.38	1.27
Asphalt Layer	2.67	13.60	16.98	0.02	1.33	1.33	1.22
Soil Stabilizer	2.97	9.77	26.70	0.05	0.95	0.95	0.87
Roller	2.37	12.09	15.10	0.02	1.18	1.18	1.09
Dozers	4.50	17.53	38.98	0.07	1.41	1.41	1.30
Subtotal	15.94	73.48	122.96	0.20	6.25	6.25	5.75
2017 Site Preparation							
Grading and Infrastructure							
Grader	3.19	20.43	22.97	0.04	1.25	1.25	1.15
Asphalt Layer	2.45	13.50	15.75	0.02	1.19	1.19	1.10
Soil Stabilizer	2.80	9.49	24.10	0.05	0.85	0.85	0.78
Roller	2.18	12.00	14.00	0.02	1.06	1.06	0.98
Dozers	4.26	16.77	35.15	0.07	1.27	1.27	1.17
Subtotal	10.61	55.42	76.82	0.13	4.35	4.35	4.00
2018 Building Construction							
Onsite Field Trucks	5.22	20.75	40.59	0.09	1.46	1.46	1.35
Subtotal	5.22	20.75	40.59	0.09	1.46	1.46	1.35
Combined	175.30	728.31	1661.32	1.92	66.03	66.03	60.75
Combined Daily Emissions	7.97	33.11	75.51	0.09	3.00	3.00	2.76
Average Daily Emissions	1.14	4.73	10.79	0.01	0.43	0.43	0.39

Table J-17. HPS Construction Emissions (lbs/day)

	<i>VOC</i>	<i>CO</i>	<i>NO_x</i>	<i>SO_x</i>	<i>PM</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
Fulltime	10.17	41.03	84.59	0.12	3.71	3.71	3.41
Half Time (1/2)	0.72	3.14	6.39	0.01	0.27	0.27	0.24
Part Time (1/4)	1.14	4.73	10.79	0.01	0.43	0.43	0.39
Haul Trucks	20.88	43.08	65.54	0.08	3.85	3.48	2.62
Total (lbs/day)	<i>32.91</i>	<i>91.98</i>	<i>167.30</i>	<i>0.21</i>	<i>8.26</i>	<i>7.88</i>	<i>6.67</i>
Alternative 1	32.91	91.98	167.30	0.21	8.26	7.88	6.67
Alternative 1A	32.91	91.98	167.30	0.21	8.26	7.88	6.67
Alternative 2	40.58	113.40	206.26	0.26	10.18	9.71	8.22
Alternative 2A	40.55	113.32	206.12	0.26	10.17	9.71	8.22
Alternative 3	38.70	108.16	196.74	0.25	9.71	9.27	7.84
Alternative 4	25.26	70.59	128.41	0.16	6.34	6.05	5.12

	<i>ROG</i>	<i>CO</i>	<i>NO_x</i>	<i>SO_x</i>	<i>PM</i>	<i>CO₂</i>
0-15 HP	0.45	2.14	2.87	0.01	0.15	334.72
16-25 HP	0.49	1.52	2.76	0.00	0.16	325.42
26-50 HP	1.49	3.87	3.44	0.00	0.35	330.57
51-120 HP	0.66	2.36	4.05	0.00	0.36	334.79
121-175 HP	0.47	2.02	3.75	0.00	0.21	344.03
176-250 HP	0.34	0.97	3.60	0.00	0.13	344.53
251-500 HP	0.29	1.08	3.03	0.00	0.11	331.89
500-750 HP	0.31	1.18	3.25	0.00	0.12	340.65
>750HP	0.37	1.49	4.14	0.00	0.13	336.31

	<i>ROG</i>	<i>CO</i>	<i>NO_x</i>	<i>SO_x</i>	<i>PM</i>	<i>CO₂</i>
0-15 HP	0.39	2.06	2.52	0.01	0.11	335.60
16-25 HP	0.40	1.37	2.53	0.00	0.10	326.93
26-50 HP	0.57	2.98	2.50	0.00	0.13	331.33
51-120 HP	0.30	2.19	2.00	0.00	0.13	335.22
121-175 HP	0.24	1.97	1.58	0.00	0.08	343.18
176-250 HP	0.19	0.73	1.38	0.00	0.05	343.57
251-500 HP	0.17	0.71	1.16	0.00	0.04	332.32
500-750 HP	0.19	0.76	1.28	0.00	0.05	344.13
>750HP	0.21	0.84	2.35	0.00	0.06	334.97

Tabel J-20-A.Yearly On-Road Composite Emission Factors - Years 2010 -2018

2010 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms)	D	12.10	25.26	37.29	0.04	2.31	2.08	1.57	(1)
On-road Truck - 25 mph (Gm)	D	1.50	7.95	15.51	0.02	0.65	0.59	0.44	(1)
On-road Truck - 55 mph (Gm)	D	0.81	4.66	14.53	0.02	0.58	0.52	0.39	(1)
Other On-Road Trucks - Cor	D	9.42	20.77	31.79	0.04	1.89	1.70	1.29	(2)

2020 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms)	D	12.22	10.01	12.49	0.04	0.49	0.49	0.33	(1)
On-road Truck - 25 mph (Gm)	D	2.82	2.63	5.23	0.02	0.21	0.21	0.14	(1)
On-road Truck - 55 mph (Gm)	D	1.09	2.12	4.23	0.02	0.25	0.25	0.17	(1)
Other On-Road Trucks - Cor	D	9.79	8.14	10.63	0.03	0.42	0.42	0.29	(2)

(1) Heavy duty diesel truck running emission factors developed from EMFAC2007 (CARB 2006b). Units in gms/mile calculated for project year 2010.

(2) For on-road trucks, composite emission factors developed from EMFAC 2007 based on a round trip of 75% at 55 mph, 20% at 25 mph, and 5% at 5 mph. Units in grams/mile. Although not shown in these calculations, emissions from 5 minutes of idling mode included for each truck round trip.

2011	URBEMIS Emission Factors (g/mile)						
	VOC	CO	NOx	SOx	PM	PM10	PM2.5
2011	9.45	19.50	29.68	0.03	1.74	1.57	1.19

Tabel J-20-B. Yearly On-Road Composite Emission Factors - Years 2010 -2018

2010 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NO _x	SO _x	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.10	25.26	37.29	0.04	2.31	2.08	1.57	(1)
On-road Truck - 25 mph (Gms/Mi)	D	1.50	7.95	15.51	0.02	0.65	0.59	0.44	(1)
On-road Truck - 55 mph (Gms/Mi)	D	0.81	4.66	14.53	0.02	0.58	0.52	0.39	(1)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.42	20.77	31.79	0.04	1.89	1.70	1.29	(2)

(1) Heavy duty diesel truck running emission factors developed from EMFAC2007 (CARB 2006b). Units in gms/mile calculated for project year 2010.

(2) For on-road trucks, composite emission factors developed from EMFAC 2007 based on a round trip of 75% at 55 mph, 20% at 25 mph, and 5% at 5 mph. Units in grams/mile. Although not shown in these calculations, emissions from 5 minutes of idling mode included for each truck round trip.

2020 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NO _x	SO _x	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.22	10.01	12.49	0.04	0.49	0.49	0.33	(1)
On-road Truck - 25 mph (Gms/Mi)	D	2.82	2.63	5.23	0.02	0.21	0.21	0.14	(1)
On-road Truck - 55 mph (Gms/Mi)	D	1.09	2.12	4.23	0.02	0.25	0.25	0.17	(1)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.79	8.14	10.63	0.03	0.42	0.42	0.29	(2)

2012	URBEMIS Emission Factors (g/mile)						
	VOC	CO	NO _x	SO _x	PM	PM10	PM2.5
Other On-Road Trucks - Composite (Gms/Mi)	9.49	18.24	27.56	0.03	1.60	1.45	1.09

Tabel J-20-C. Yearly On-Road Composite Emission Factors - Years 2010 -2018

2010 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.10	25.26	37.29	0.04	2.31	2.08	1.57	(1)
On-road Truck - 25 mph (Gms/Mi)	D	1.50	7.95	15.51	0.02	0.65	0.59	0.44	(1)
On-road Truck - 55 mph (Gms/Mi)	D	0.81	4.66	14.53	0.02	0.58	0.52	0.39	(1)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.42	20.77	31.79	0.04	1.89	1.70	1.29	(2)

(1) Heavy duty diesel truck running emission factors developed from EMFAC2007 (CARB 2006b). Units in gms/mile calculated for project year 2010.

(2) For on-road trucks, composite emission factors developed from EMFAC 2007 based on a round trip of 75% at 55 mph, 20% at 25 mph, and 5% at 5 mph. Units in grams/mile. Although not shown in these calculations, emissions from 5 minutes of idling mode included for each truck round trip.

2020 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.22	10.01	12.49	0.04	0.49	0.49	0.33	(1)
On-road Truck - 25 mph (Gms/Mi)	D	2.82	2.63	5.23	0.02	0.21	0.21	0.14	(1)
On-road Truck - 55 mph (Gms/Mi)	D	1.09	2.12	4.23	0.02	0.25	0.25	0.17	(1)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.79	8.14	10.63	0.03	0.42	0.42	0.29	(2)

2013 **URBEMIS Emission Factors (g/mile)**

	VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}
Other On-Road Trucks - Composite (Gms/Mi)	9.53	16.98	25.44	0.03	1.45	1.32	0.99

Tabel J-20-D.Yearly On-Road Composite Emission Factors - Years 2010 -2018

2010 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.10	25.26	37.29	0.04	2.31	2.08	1.57	(1)
On-road Truck - 25 mph (Gms/Mi)	D	1.50	7.95	15.51	0.02	0.65	0.59	0.44	(1)
On-road Truck - 55 mph (Gms/Mi)	D	0.81	4.66	14.53	0.02	0.58	0.52	0.39	(1)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.42	20.77	31.79	0.04	1.89	1.70	1.29	(2)

(1) Heavy duty diesel truck running emission factors developed from EMFAC2007 (CARB 2006b). Units in gms/mile calculated for project year 2010.

(2) For on-road trucks, composite emission factors developed from EMFAC 2007 based on a round trip of 75% at 55 mph, 20% at 25 mph, and 5% at 5 mph. Units in grams/mile. Although not shown in these calculations, emissions from 5 minutes of idling mode included for each truck round trip.

2020 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.22	10.01	12.49	0.04	0.49	0.49	0.33	(1)
On-road Truck - 25 mph (Gms/Mi)	D	2.82	2.63	5.23	0.02	0.21	0.21	0.14	(1)
On-road Truck - 55 mph (Gms/Mi)	D	1.09	2.12	4.23	0.02	0.25	0.25	0.17	(1)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.79	8.14	10.63	0.03	0.42	0.42	0.29	(2)

2014		URBEMIS Emission Factors (g/mile)						
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}
Other On-Road Trucks - Composite (Gms/Mi)		9.56	15.72	23.33	0.03	1.30	1.19	0.89

Table J-20-E.Yearly On-Road Composite Emission Factors - Years 2010 -2018

2010 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.10	25.26	37.29	0.04	2.31	2.08	1.57	(1)
On-road Truck - 25 mph (Gms/Mi)	D	1.50	7.95	15.51	0.02	0.65	0.59	0.44	(1)
On-road Truck - 55 mph (Gms/Mi)	D	0.81	4.66	14.53	0.02	0.58	0.52	0.39	(1)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.42	20.77	31.79	0.04	1.89	1.70	1.29	(2)

(1) Heavy duty diesel truck running emission factors developed from EMFAC2007 (CARB 2006b). Units in gms/mile calculated for project year 2010.

(2) For on-road trucks, composite emission factors developed from EMFAC 2007 based on a round trip of 75% at 55 mph, 20% at 25 mph, and 5% at 5 mph. Units in grams/mile. Although not shown in these calculations, emissions from 5 minutes of idling mode included for each truck round trip.

2020 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.22	10.01	12.49	0.04	0.49	0.49	0.33	(3)
On-road Truck - 25 mph (Gms/Mi)	D	2.82	2.63	5.23	0.02	0.21	0.21	0.14	(3)
On-road Truck - 55 mph (Gms/Mi)	D	1.09	2.12	4.23	0.02	0.25	0.25	0.17	(3)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.79	8.14	10.63	0.03	0.42	0.42	0.29	(4)

2015	URBEMIS Emission Factors (g/mile)						
	VOC	CO	NOx	SOx	PM	PM10	PM2.5
Other On-Road Trucks - Composite (Gms/Mi)	9.60	14.45	21.21	0.03	1.16	1.06	0.79

Table J-20-F. Yearly On-Road Composite Emission Factors - Years 2010 -2018

2010 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.10	25.26	37.29	0.04	2.31	2.08	1.57	(1)
On-road Truck - 25 mph (Gms/Mi)	D	1.50	7.95	15.51	0.02	0.65	0.59	0.44	(1)
On-road Truck - 55 mph (Gms/Mi)	D	0.81	4.66	14.53	0.02	0.58	0.52	0.39	(1)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.42	20.77	31.79	0.04	1.89	1.70	1.29	(2)

(1) Heavy duty diesel truck running emission factors developed from EMFAC2007 (CARB 2006b). Units in gms/mile calculated for project year 2010.

(2) For on-road trucks, composite emission factors developed from EMFAC 2007 based on a round trip of 75% at 55 mph, 20% at 25 mph, and 5% at 5 mph. Units in grams/mile. Although not shown in these calculations, emissions from 5 minutes of idling mode included for each truck round trip.

2020 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.22	10.01	12.49	0.04	0.49	0.49	0.33	(1)
On-road Truck - 25 mph (Gms/Mi)	D	2.82	2.63	5.23	0.02	0.21	0.21	0.14	(1)
On-road Truck - 55 mph (Gms/Mi)	D	1.09	2.12	4.23	0.02	0.25	0.25	0.17	(1)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.79	8.14	10.63	0.03	0.42	0.42	0.29	(2)

2016	URBEMIS Emission Factors (g/mile)						
	VOC	CO	NOx	SOx	PM	PM10	PM2.5
Other On-Road Trucks - Composite (Gms/Mi)	9.64	13.19	19.09	0.03	1.01	0.93	0.69

Table J-20-G. Yearly On-Road Composite Emission Factors - Years 2010 -2018

2010 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.10	25.26	37.29	0.04	2.31	2.08	1.57	(1)
On-road Truck - 25 mph (Gms/Mi)	D	1.50	7.95	15.51	0.02	0.65	0.59	0.44	(1)
On-road Truck - 55 mph (Gms/Mi)	D	0.81	4.66	14.53	0.02	0.58	0.52	0.39	(1)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.42	20.77	31.79	0.04	1.89	1.70	1.29	(2)

(1) Heavy duty diesel truck running emission factors developed from EMFAC2007 (CARB 2006b). Units in gms/mile calculated for project year 2010.

(2) For on-road trucks, composite emission factors developed from EMFAC 2007 based on a round trip of 75% at 55 mph, 20% at 25 mph, and 5% at 5 mph. Units in grams/mile. Although not shown in these calculations, emissions from 5 minutes of idling mode included for each truck round trip.

2020 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.22	10.01	12.49	0.04	0.49	0.49	0.33	(3)
On-road Truck - 25 mph (Gms/Mi)	D	2.82	2.63	5.23	0.02	0.21	0.21	0.14	(3)
On-road Truck - 55 mph (Gms/Mi)	D	1.09	2.12	4.23	0.02	0.25	0.25	0.17	(3)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.79	8.14	10.63	0.03	0.42	0.42	0.29	(4)

2017 URBEMIS Emission Factors (g/mile)							
	VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}
Other On-Road Trucks - Composite (Gms/Mi)	9.67	11.93	16.98	0.03	0.86	0.80	0.59

Table J-20-H. Yearly On-Road Composite Emission Factors - Years 2010 -2018

2010 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.10	25.26	37.29	0.04	2.31	2.08	1.57	(1)
On-road Truck - 25 mph (Gms/Mi)	D	1.50	7.95	15.51	0.02	0.65	0.59	0.44	(1)
On-road Truck - 55 mph (Gms/Mi)	D	0.81	4.66	14.53	0.02	0.58	0.52	0.39	(1)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.42	20.77	31.79	0.04	1.89	1.70	1.29	(2)

(1) Heavy duty diesel truck running emission factors developed from EMFAC2007 (CARB 2006b). Units in gms/mile calculated for project year 2010.

(2) For on-road trucks, composite emission factors developed from EMFAC 2007 based on a round trip of 75% at 55 mph, 20% at 25 mph, and 5% at 5 mph. Units in grams/mile. Although not shown in these calculations, emissions from 5 minutes of idling mode included for each truck round trip.

2020 EMFAC2007 Emission Factors (g/mile)									
		VOC	CO	NOx	SOx	PM	PM ₁₀	PM _{2.5}	Notes
On-road Truck - 5 mph (Gms/Mi)	D	12.22	10.01	12.49	0.04	0.49	0.49	0.33	(1)
On-road Truck - 25 mph (Gms/Mi)	D	2.82	2.63	5.23	0.02	0.21	0.21	0.14	(1)
On-road Truck - 55 mph (Gms/Mi)	D	1.09	2.12	4.23	0.02	0.25	0.25	0.17	(1)
Other On-Road Trucks - Composite (Gms/Mi)	D	9.79	8.14	10.63	0.03	0.42	0.42	0.29	(2)

2018	URBEMIS Emission Factors (g/mile)						
	VOC	CO	NOx	SOx	PM	PM10	PM2.5
Other On-Road Trucks - Composite (Gms/Mi)	9.71	10.66	14.86	0.03	0.71	0.68	0.49

Table J-21. Land Uses for Proposed HPS Project Alternatives

Land Use	Stadium Plan Alternative	Stadium Plan/No Bridge Alternative	Non-Stadium Plan /Additional R&D	Non-Stadium Plan /Housing and R&D	Non-Stadium Plan /Additional Housing Alternative	Non-Stadium Plan /Reduced Development Alternative
Acreage						
Dry Land (acres)	417	417	417	417	417	417
Submerged (acres)	443	443	443	443	443	443
Total (acres)	860	860	860	860	860	860
Residential Units						
Density Range I (15 to 75 units/acre)	680	680	680	1320	1,540	N/A ¹
Density Range II (50 to 125 units/acre)	1,415	1,415	1,415	2,185	1,905	N/A ¹
Density Range III (100 to 175 units/acre)	265	265	265	460	265	N/A ¹
Density Range IV (175 to 285 units/acre)	290	290	290	310	290	N/A ¹
Total (units)	2,650	2,650	2,650	4,275	4,000	1,855
Neighborhood Retail						
Square Feet	125,000	125,000	125,000	125,000	125,000	87,500
Research & Development						
Square Feet	2,500,000	2,500,000	5,000,000	3,000,000	2,500,000	1,750,000
Artist's Studios						
1:1 Studio Renovation and Replacement (sf)	225,000	225,000	225,000	225,000	225,000	225,000
New Artist Center (sf)	30,000	30,000	30,000	30,000	30,000	30,000
Total (sf)	255,000	255,000	255,000	255,000	255,000	255,000
Parks & Open Space						
New City Parks (acres)	140	140	152.4	150.9	149.9	132
New & Restored State Parkland (acres)	91.6	91.6	69.8	70.9	94.7	82
Total (acres)	231.6	231.6	222.2	221.8	244.6	214
Stadium						
Football (Seats)	69,000	69,000	0	0	0	0
<i>Notes:</i>						
1. Not Available. The CP-HPS DEIR redevelopment plan did not classify residential units based on density range for the Non-Stadium Plan/Reduced Development Alternative. Thus, only the total number of residential units is provided for the SEIS.						
2. Based on Year 2025 estimates from the FEIS.						

Table J-22. SEIS Alt1 - Stadium Plan Alternative

Emission Estimates (lbs/day)

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Area Source	168	53	30	0	1	1
Mobile Source	83	99	880	2	411	78
Subtotal	251	152	911	2	412	79
Existing Conditions	(17)	(28)	(169)	(1)	(0)	(0)
Difference	234	124	742	2	411	79
TPY	43	23	135	0	75	14

GHGs	mT per year	Activity
Vegetation	(88)	
Residential	6,642	
Non-Residential	13,766	2,880,000 sq. ft.
Mobile	30,371	
Municipal	766	
Area	56	
Waste	375	
Transit Area	865	
Total	52,753	
NAA	-	
Net	52,753	

Table J-23. SEIS Alt1A - Stadium Plan/No Bridge Alternative

Emission Estimates (lbs/day)

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Area Source	168	39	35	0	0	0
Mobile Source	83	99	880	2	411	78
Subtotal	251	138	915	2	411	78
Existing Conditions	(17)	(28)	(169)	(1)	(0)	(0)
Difference	234	110	746	1	410	77
TPY	43	20	136	0	75	14

Table J-24. SEIS Alt2 - Non-Stadium Plan/Additional R&D Alternative

Emission Estimates (lbs/day)

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Area Source	184	70	44	0	1	1
Mobile Source	106	126	1,121	3	521	99
Subtotal	290	196	1,166	3	523	100
Existing Conditions	(17)	(28)	(169)	(1)	(0)	(0)
Difference	273	168	996	2	522	100
TPY	50	31	182	0	95	18

	Units	Acres	%	Trips	Trip Rate
Apartments mid rise	1415	37.24	7%	2337.62	1.65
Apartments high rise	555	8.95	2%	561.81	1.01
Condo/townhouse general	680	42.5	8%	2667.80	3.92
City park		222.2	40%	13947.89	62.77
Strip mall	125	5.74	1%	360.31	2.88
Office park	5000	229.57	41%	14410.52	2.88
General light industry	255	11.71	2%	735.06	2.88
Total		557.91		35021	78.01

GHGs	mT per year
Vegetation	(88)
Residential	6,642
Non-Residential	23,115
Mobile	42,332
Municipal	860
Area	56
Waste	506
Transit Area	865
Total	74,288
NAA	-
Net	74,288

Table J-25. SEIS Alt2A - Non-Stadium Plan/Housing and R&D Alternative
Emission Estimates (lbs/day)

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Area Source	263	78	42	0	2	2
Mobile Source	106	126	1,121	3	522	99
Subtotal	369	204	1163	3	524	101
Existing Conditions	(17)	(28)	(169)	(1)	(0)	(0)
Difference	352	176	994	2	523	100
TPY	64	32	181	0	95	18

	Units	Acres	%	Trips	Trip Rate
Apartmens mid rise	2185	37.24	7%	2317.86	1.06
Apartments high rise	770	8.95	2%	557.06	0.72
Condo/townhouse gener:	1320	42.5	8%	2645.24	2.00
City park		221.8	40%	13805.06	62.24
Stip mall	125	5.74	1%	357.26	2.86
Office park	3000	229.57	41%	14288.67	4.76
General light industry	255	11.71	2%	728.84	2.86
Total		557.51		34700	76.51

GHGs	mT per year
Vegetation	(88)
Residential	10,715
Non-Residential	14,340
Mobile	41,944
Municipal	1,236
Area	90
Waste	500
Transit Area	865
Total	69,601
NAA	-
Net	69,601

283.5

Note: GHG emissions are based on a ratio of Alternative 1 build out and Alternative 2A build out.

Table J-26. SEIS Alt3 - Non-Stadium Plan/Additional Housing Alternative
Emission Estimates (lbs/day)

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Source	244	71	38	0	2	2
Mobile Source	95	112	1,000	2	468	89
Subtotal	339	183	1,038	2	470	90
Existing Conditions	(17)	(28)	(169)	(1)	(0)	(0)
Difference	322	156	868	2	470	90
TPY	59	28	158	0	86	16

	Units	Acres	%	Trips	Trip Rate
Apartments mid rise	1905	50.13	9%	2793	1.47
Apartments high rise	555	8.95	2%	499	0.90
Condo/townhouse generz	1540	96.25	18%	5362	3.48
City park		244.6	46%	13626	55.71
Strip mall	125	5.74	1%	320	2.56
Office park	2500	114.78	22%	6394	2.56
General light industry	255	11.71	2%	652	2.56
Total		532.16		29645	

GHGs	mT per year
Vegetation	(88)
Residential	10,026
Non-Residential	13,766
Mobile	32,859
Municipal	1,156
Area	85
Waste	456
Transit Area	865
Total	59,125
NAA	(1,405)
Net	57,720

240

Note: GHG emissions are based on a ratio of Alternative 1 build out and Alternative 3 build out.

Table J-27. SEIS Alt4 - Non-Stadium Plan/Reduced Development Alternative

Emission Estimates (lbs/day)

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area Source	118	38	22	0	1	1
Mobile Source	66	78	690	2	321	61
Subtotal	184	115	712	2	322	62
Existing Conditions	(17)	(28)	(169)	(1)	(0)	(0)
Difference	167	87	543	1	321	61
TPY	30	16	99	0	59	11

	Units	Acres	%	Trips	Trip Rate
Apartmens mid rise	1855	37.24	11%	2427	1.31
Apartments high rise					
Condo/townhouse general					
City park		214	62%	13947	65.17
Strip mall	87.5	4.02	1%	262	2.99
Office park	1750	80.35	23%	5237	2.99
General light industry	255	11.71	3%	763	2.99
Total		347.32		22636	

GHGs	mT per year	Activity
Vegetation	(88)	
Residential	4,649	
Non-Residential	10,002	2,092,500 sq. ft.
Mobile	25,090	
Municipal	536	
Area	39	
Waste	263	111.3
Transit Area	865	
Total	41,357	
NAA	-	
Net	41,357	

Waste Calcs	Units - SF	Lb Waste/Unit-Year	Total Waste (mt)	CO ₂ e
Res	see above			111.3
Retail	87,500	2.1	83.5	5.6
Office	no Change	1.87		9.0
Hotel	no Change	1840		12.0
R&D	1,750,000	2.19	1,742.0	117.4
Artists	no Change	1.87		3.0
Music venue	no Change	17.2		5.0
CO ₂ e EF = 0.0674 mt CO ₂ e/mt waste				263.3

See table 3-33 DEIR Appx S for details

Note: GHG emissions are based on a ratio of Alternative 1 build out and Alternative 3 build out.

Table J-28. SEIS - No Project Alternative

Emission Estimates (lbs/day)

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Area Source	114	37	21	0	1	1
Mobile Source	49	58	519	1	243	46
Subtotal	163	95	540	1	244	47
Existing Conditions	(17)	(28)	(169)	(1)	(0)	(0)
Difference	146	68	371	1	244	47
TPY	27	12	68	0	44	8

Table J-29. HPS Alternatives' 1993 NAA Construction Emissions Comparison (lbs/day)

	VOC	CO	NOx	SOx	PM ₁₀	PM _{2.5}
1993 Existing Conditions	<i>(17.10)</i>	<i>(27.84)</i>	<i>(169.17)</i>	<i>(0.54)</i>	<i>(0.36)</i>	<i>(0.33)</i>
Alternative 1	15.81	64.13	<i>(1.87)</i>	<i>(0.32)</i>	7.89	7.55
Alternative 2	23.48	85.56	37.09	<i>(0.27)</i>	9.82	9.38
Alternative 3	21.60	80.32	27.57	<i>(0.29)</i>	9.35	8.93
Alternative 4	8.16	42.75	<i>(40.76)</i>	<i>(0.37)</i>	5.97	5.72

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS Alt1.urb924

Project Name: HPS Stadium Plan Alternative 1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	30.60	7.08	5.39	0.00	0.01	0.01	8,758.27

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	15.05	15.19	144.32	0.36	74.92	14.16	36,623.60

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	45.65	22.27	149.71	0.36	74.93	14.17	45,381.87

3/19/2010 10:07:59 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.53	7.06	4.42	0.00	0.01	0.01	8,747.15
Hearth	0.01	0.01	0.00	0.00	0.00	0.00	9.35
Landscape	0.08	0.01	0.97	0.00	0.00	0.00	1.77
Consumer Products	23.66						
Architectural Coatings	6.32						
TOTALS (tons/year, unmitigated)	30.60	7.08	5.39	0.00	0.01	0.01	8,758.27

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS Alt1.urb924

Project Name: HPS Stadium Plan Alternative 1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	168.06	38.81	35.02	0.00	0.11	0.11	47,949.25

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	82.07	75.36	745.99	1.98	410.55	77.66	201,691.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	250.13	114.17	781.01	1.98	410.66	77.77	249,640.91

3/19/2010 10:07:09 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	2.90	38.67	24.20	0.00	0.07	0.07	47,929.59
Hearth - No Summer Emissions							
Landscape	0.86	0.14	10.82	0.00	0.04	0.04	19.66
Consumer Products							
Architectural Coatings	34.65						
TOTALS (lbs/day, unmitigated)	168.06	38.81	35.02	0.00	0.11	0.11	47,949.25

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

3/19/2010 10:07:09 AM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	11.26	8.78	89.39	0.24	48.99	9.27	24,174.71
Apartments high rise	3.25	2.12	21.61	0.06	11.84	2.24	5,844.22
Condo/townhouse general	10.55	10.03	102.12	0.27	55.97	10.59	27,619.02
City park	30.60	33.29	321.66	0.86	179.23	33.88	87,620.50
Strip mall	1.05	0.82	7.88	0.02	4.40	0.83	2,150.98
Office park	23.00	18.43	184.40	0.48	99.88	18.91	49,232.92
General light industry	2.36	1.89	18.93	0.05	10.24	1.94	5,049.31
TOTALS (lbs/day, unmitigated)	82.07	75.36	745.99	1.98	410.55	77.66	201,691.66

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 70 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	37.24	1.59	dwelling units	1,415.00	2,249.85	28,573.10
Apartments high rise	8.95	0.98	dwelling units	555.00	543.90	6,907.53
Condo/townhouse general	42.50	3.78	dwelling units	680.00	2,570.40	32,644.08
City park		60.55	acres	231.60	14,023.38	104,579.36

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		2.78	1000 sq ft	125.00	347.50	2,569.07
Office park		2.78	1000 sq ft	2,500.00	6,950.00	58,254.90
General light industry		2.78	1000 sq ft	255.00	708.90	5,972.48
					27,393.93	239,500.52

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Summary Report for Winter Emissions (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS Alt1.urb924

Project Name: HPS Stadium Plan Alternative 1

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	168.06	53.32	30.44	0.09	1.25	1.24	66,635.47

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	83.42	98.97	880.37	1.98	410.55	77.66	198,648.41

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	251.48	152.29	910.81	2.07	411.80	78.90	265,283.88

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\Admin Draft 2\Urbemis\HPS Alt1A.urb924

Project Name: HPS Stadium Plan-No Bridge Alternative 1A

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	30.60	7.08	5.39	0.00	0.01	0.01	8,758.27

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	15.05	15.19	144.32	0.36	74.92	14.16	36,623.60

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	45.65	22.27	149.71	0.36	74.93	14.17	45,381.87

9/20/2010 1:30:43 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.53	7.06	4.42	0.00	0.01	0.01	8,747.15
Hearth	0.01	0.01	0.00	0.00	0.00	0.00	9.35
Landscape	0.08	0.01	0.97	0.00	0.00	0.00	1.77
Consumer Products	23.66						
Architectural Coatings	6.32						
TOTALS (tons/year, unmitigated)	30.60	7.08	5.39	0.00	0.01	0.01	8,758.27

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\Admin Draft 2\Urbemis\HPS Alt1A.urb924

Project Name: HPS Stadium Plan-No Bridge Alternative 1A

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	168.06	38.81	35.02	0.00	0.11	0.11	47,949.25

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	82.07	75.36	745.99	1.98	410.55	77.66	201,691.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	250.13	114.17	781.01	1.98	410.66	77.77	249,640.91

9/20/2010 1:29:50 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	2.90	38.67	24.20	0.00	0.07	0.07	47,929.59
Hearth - No Summer Emissions							
Landscape	0.86	0.14	10.82	0.00	0.04	0.04	19.66
Consumer Products							
Architectural Coatings	34.65						
TOTALS (lbs/day, unmitigated)	168.06	38.81	35.02	0.00	0.11	0.11	47,949.25

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

9/20/2010 1:29:50 PM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	11.26	8.78	89.39	0.24	48.99	9.27	24,174.71
Apartments high rise	3.25	2.12	21.61	0.06	11.84	2.24	5,844.22
Condo/townhouse general	10.55	10.03	102.12	0.27	55.97	10.59	27,619.02
City park	30.60	33.29	321.66	0.86	179.23	33.88	87,620.50
Strip mall	1.05	0.82	7.88	0.02	4.40	0.83	2,150.98
Office park	23.00	18.43	184.40	0.48	99.88	18.91	49,232.92
General light industry	2.36	1.89	18.93	0.05	10.24	1.94	5,049.31
TOTALS (lbs/day, unmitigated)	82.07	75.36	745.99	1.98	410.55	77.66	201,691.66

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 70 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	37.24	1.59	dwelling units	1,415.00	2,249.85	28,573.10
Apartments high rise	8.95	0.98	dwelling units	555.00	543.90	6,907.53
Condo/townhouse general	42.50	3.78	dwelling units	680.00	2,570.40	32,644.08
City park		60.55	acres	231.60	14,023.38	104,579.36

9/20/2010 1:29:50 PM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		2.78	1000 sq ft	125.00	347.50	2,569.07
Office park		2.78	1000 sq ft	2,500.00	6,950.00	58,254.90
General light industry		2.78	1000 sq ft	255.00	708.90	5,972.48
					27,393.93	239,500.52

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\Admin Draft 2\Urbemis\HPS Alt1A.urb924

Project Name: HPS Stadium Plan-No Bridge Alternative 1A

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	168.06	53.32	30.44	0.09	1.25	1.24	66,635.47

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	83.42	98.97	880.37	1.98	410.55	77.66	198,648.41

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	251.48	152.29	910.81	2.07	411.80	78.90	265,283.88

9/20/2010 1:30:16 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	2.90	38.67	24.20	0.00	0.07	0.07	47,929.59
Hearth	0.86	14.65	6.24	0.09	1.18	1.17	18,705.88
Landscaping - No Winter Emissions							
Consumer Products	129.65						
Architectural Coatings	34.65						
TOTALS (lbs/day, unmitigated)	168.06	53.32	30.44	0.09	1.25	1.24	66,635.47

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

9/20/2010 1:30:16 PM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	9.59	11.56	102.36	0.24	48.99	9.27	23,811.64
Apartments high rise	2.32	2.79	24.75	0.06	11.84	2.24	5,756.45
Condo/townhouse general	10.95	13.21	116.94	0.27	55.97	10.59	27,204.23
City park	37.14	43.65	387.29	0.86	179.23	33.88	86,291.64
Strip mall	0.91	1.07	9.51	0.02	4.40	0.83	2,118.33
Office park	20.42	24.21	217.24	0.48	99.88	18.91	48,492.70
General light industry	2.09	2.48	22.28	0.05	10.24	1.94	4,973.42
TOTALS (lbs/day, unmitigated)	83.42	98.97	880.37	1.98	410.55	77.66	198,648.41

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	37.24	1.59	dwelling units	1,415.00	2,249.85	28,573.10
Apartments high rise	8.95	0.98	dwelling units	555.00	543.90	6,907.53
Condo/townhouse general	42.50	3.78	dwelling units	680.00	2,570.40	32,644.08
City park		60.55	acres	231.60	14,023.38	104,579.36

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		2.78	1000 sq ft	125.00	347.50	2,569.07
Office park		2.78	1000 sq ft	2,500.00	6,950.00	58,254.90
General light industry		2.78	1000 sq ft	255.00	708.90	5,972.48
					27,393.93	239,500.52

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

3/19/2010 1:01:21 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS Alt2.urb924

Project Name: HPS Stadium Plan Alternative 2

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	33.49	10.12	7.94	0.00	0.02	0.02	12,408.27

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	19.46	19.31	183.88	0.45	95.17	18.01	46,551.57

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	52.95	29.43	191.82	0.45	95.19	18.03	58,959.84

3/19/2010 1:01:21 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.75	10.10	6.97	0.00	0.02	0.02	12,397.15
Hearth	0.01	0.01	0.00	0.00	0.00	0.00	9.35
Landscape	0.08	0.01	0.97	0.00	0.00	0.00	1.77
Consumer Products	23.66						
Architectural Coatings	8.99						
TOTALS (tons/year, unmitigated)	33.49	10.12	7.94	0.00	0.02	0.02	12,408.27

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

3/19/2010 1:01:21 PM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	2.01	1.84	17.75	0.04	9.28	1.76	4,555.45
Apartments high rise	0.55	0.44	4.26	0.01	2.23	0.42	1,093.72
Condo/townhouse general	2.01	2.10	20.26	0.05	10.59	2.00	5,200.99
City park	5.95	6.67	62.36	0.16	32.53	6.15	15,823.81
Strip mall	0.19	0.17	1.59	0.00	0.83	0.16	404.62
Office park	8.32	7.70	73.87	0.18	37.77	7.15	18,523.12
General light industry	0.43	0.39	3.79	0.01	1.94	0.37	949.86
TOTALS (tons/year, unmitigated)	19.46	19.31	183.88	0.45	95.17	18.01	46,551.57

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	37.24	1.65	dwelling units	1,415.00	2,334.75	29,651.32
Apartments high rise	8.95	1.01	dwelling units	555.00	560.55	7,118.98
Condo/townhouse general	42.50	3.92	dwelling units	680.00	2,665.60	33,853.12
City park		62.77	acres	222.20	13,947.49	104,013.43

3/19/2010 1:01:21 PM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		2.88	1000 sq ft	125.00	360.00	2,661.48
Office park		2.88	1000 sq ft	5,000.00	14,400.00	120,700.80
General light industry		2.88	1000 sq ft	255.00	734.40	6,187.32
					35,002.79	304,186.45

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS Alt2.urb924

Project Name: HPS Stadium Plan Alternative 2

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	183.91	55.47	49.02	0.00	0.14	0.14	67,949.25

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	106.87	95.81	950.70	2.51	521.46	98.65	256,365.47

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	290.78	151.28	999.72	2.51	521.60	98.79	324,314.72

3/19/2010 12:53:45 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	4.11	55.33	38.20	0.00	0.10	0.10	67,929.59
Hearth - No Summer Emissions							
Landscape	0.86	0.14	10.82	0.00	0.04	0.04	19.66
Consumer Products	129.65						
Architectural Coatings	49.29						
TOTALS (lbs/day, unmitigated)	183.91	55.47	49.02	0.00	0.14	0.14	67,949.25

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

3/19/2010 12:53:45 PM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	11.55	9.11	92.76	0.25	50.84	9.62	25,086.96
Apartments high rise	3.31	2.19	22.27	0.06	12.21	2.31	6,023.13
Condo/townhouse general	10.88	10.40	105.91	0.28	58.04	10.98	28,641.95
City park	30.42	33.11	319.92	0.85	178.26	33.70	87,146.35
Strip mall	1.07	0.85	8.17	0.02	4.56	0.86	2,228.35
Office park	47.22	38.19	382.06	1.00	206.94	39.17	102,007.79
General light industry	2.42	1.96	19.61	0.05	10.61	2.01	5,230.94
TOTALS (lbs/day, unmitigated)	106.87	95.81	950.70	2.51	521.46	98.65	256,365.47

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 70 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	37.24	1.65	dwelling units	1,415.00	2,334.75	29,651.32
Apartments high rise	8.95	1.01	dwelling units	555.00	560.55	7,118.98
Condo/townhouse general	42.50	3.92	dwelling units	680.00	2,665.60	33,853.12
City park		62.77	acres	222.20	13,947.49	104,013.43

3/19/2010 12:53:45 PM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		2.88	1000 sq ft	125.00	360.00	2,661.48
Office park		2.88	1000 sq ft	5,000.00	14,400.00	120,700.80
General light industry		2.88	1000 sq ft	255.00	734.40	6,187.32
					35,002.79	304,186.45

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS Alt2.urb924

Project Name: HPS Stadium Plan Alternative 2

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	183.91	69.98	44.44	0.09	1.28	1.27	86,635.47

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	106.07	125.82	1,121.23	2.51	521.46	98.65	252,500.26

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	289.98	195.80	1,165.67	2.60	522.74	99.92	339,135.73

3/19/2010 12:59:44 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	4.11	55.33	38.20	0.00	0.10	0.10	67,929.59
Hearth	0.86	14.65	6.24	0.09	1.18	1.17	18,705.88
Landscaping - No Winter Emissions							
Consumer Products	129.65						
Architectural Coatings	49.29						
TOTALS (lbs/day, unmitigated)	183.91	69.98	44.44	0.09	1.28	1.27	86,635.47

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

3/19/2010 12:59:44 PM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	9.95	11.99	106.22	0.25	50.84	9.62	24,710.19
Apartments high rise	2.39	2.88	25.50	0.06	12.21	2.31	5,932.67
Condo/townhouse general	11.36	13.69	121.28	0.28	58.04	10.98	28,211.79
City park	36.94	43.41	385.19	0.85	178.26	33.70	85,824.68
Strip mall	0.95	1.11	9.85	0.02	4.56	0.86	2,194.53
Office park	42.31	50.17	450.11	1.00	206.94	39.17	100,474.08
General light industry	2.17	2.57	23.08	0.05	10.61	2.01	5,152.32
TOTALS (lbs/day, unmitigated)	106.07	125.82	1,121.23	2.51	521.46	98.65	252,500.26

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	37.24	1.65	dwelling units	1,415.00	2,334.75	29,651.32
Apartments high rise	8.95	1.01	dwelling units	555.00	560.55	7,118.98
Condo/townhouse general	42.50	3.92	dwelling units	680.00	2,665.60	33,853.12
City park		62.77	acres	222.20	13,947.49	104,013.43

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		2.88	1000 sq ft	125.00	360.00	2,661.48
Office park		2.88	1000 sq ft	5,000.00	14,400.00	120,700.80
General light industry		2.88	1000 sq ft	255.00	734.40	6,187.32
					35,002.79	304,186.45

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

	<u>Travel Conditions</u>					
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\Admin Draft 2\Urbemis\HPS Alt2A.urb924

Project Name: HPS Non Stadium Plan-Housing and RD Alternative 2A

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	47.87	9.92	6.86	0.00	0.02	0.02	12,349.19

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	19.34	19.30	183.90	0.44	95.18	18.01	46,563.30

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	67.21	29.22	190.76	0.44	95.20	18.03	58,912.49

9/20/2010 1:18:08 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.75	9.90	5.88	0.00	0.02	0.02	12,332.33
Hearth	0.02	0.01	0.01	0.00	0.00	0.00	15.09
Landscape	0.08	0.01	0.97	0.00	0.00	0.00	1.77
Consumer Products	38.17						
Architectural Coatings	8.85						
TOTALS (tons/year, unmitigated)	47.87	9.92	6.86	0.00	0.02	0.02	12,349.19

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

9/20/2010 1:18:08 PM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	2.23	1.82	17.61	0.04	9.20	1.74	4,519.06
Apartments high rise	0.76	0.61	5.91	0.01	3.09	0.58	1,517.41
Condo/townhouse general	2.19	2.08	20.07	0.05	10.49	1.99	5,151.04
City park	5.89	6.60	61.72	0.15	32.20	6.09	15,661.95
Strip mall	0.19	0.17	1.58	0.00	0.83	0.16	401.81
Office park	7.66	7.63	73.25	0.18	37.45	7.09	18,368.76
General light industry	0.42	0.39	3.76	0.01	1.92	0.36	943.27
TOTALS (tons/year, unmitigated)	19.34	19.30	183.90	0.44	95.18	18.01	46,563.30

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	57.50	1.06	dwelling units	2,185.00	2,316.10	29,414.47
Apartments high rise	12.42	1.01	dwelling units	770.00	777.70	9,876.79
Condo/townhouse general	82.50	2.00	dwelling units	1,320.00	2,640.00	33,528.00
City park		62.24	acres	221.80	13,804.83	102,949.54

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		2.86	1000 sq ft	125.00	357.50	2,643.00
Office park		4.76	1000 sq ft	3,000.00	14,280.00	119,694.97
General light industry		2.86	1000 sq ft	255.00	729.30	6,144.35
					34,905.43	304,251.12

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\Admin Draft 2\Urbemis\HPS Alt2A.urb924

Project Name: HPS Non Stadium Plan-Housing and RD Alternative 2A

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	262.59	54.39	43.03	0.00	0.14	0.14	67,594.10

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	105.92	95.79	950.91	2.50	521.56	98.67	256,430.05

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	368.51	150.18	993.94	2.50	521.70	98.81	324,024.15

9/20/2010 1:16:32 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	4.09	54.25	32.21	0.00	0.10	0.10	67,574.44
Hearth - No Summer Emissions							
Landscape	0.86	0.14	10.82	0.00	0.04	0.04	19.66
Consumer Products							
Architectural Coatings	48.49						
TOTALS (lbs/day, unmitigated)	262.59	54.39	43.03	0.00	0.14	0.14	67,594.10

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

9/20/2010 1:16:32 PM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	13.39	9.04	92.02	0.24	50.43	9.54	24,886.56
Apartments high rise	4.59	3.03	30.90	0.08	16.93	3.20	8,356.41
Condo/townhouse general	12.37	10.30	104.89	0.28	57.48	10.88	28,366.88
City park	30.11	32.77	316.65	0.84	176.44	33.35	86,254.97
Strip mall	1.07	0.84	8.11	0.02	4.53	0.86	2,212.88
Office park	41.98	37.87	378.87	0.99	205.22	38.85	101,157.73
General light industry	2.41	1.94	19.47	0.05	10.53	1.99	5,194.62
TOTALS (lbs/day, unmitigated)	105.92	95.79	950.91	2.50	521.56	98.67	256,430.05

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 70 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	57.50	1.06	dwelling units	2,185.00	2,316.10	29,414.47
Apartments high rise	12.42	1.01	dwelling units	770.00	777.70	9,876.79
Condo/townhouse general	82.50	2.00	dwelling units	1,320.00	2,640.00	33,528.00
City park		62.24	acres	221.80	13,804.83	102,949.54

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		2.86	1000 sq ft	125.00	357.50	2,643.00
Office park		4.76	1000 sq ft	3,000.00	14,280.00	119,694.97
General light industry		2.86	1000 sq ft	255.00	729.30	6,144.35
					34,905.43	304,251.12

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\Admin Draft 2\Urbemis\HPS Alt2A.urb924

Project Name: HPS Non Stadium Plan-Housing and RD Alternative 2A

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	263.11	77.89	42.27	0.15	2.01	1.99	97,750.91

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	106.03	125.83	1,121.17	2.50	521.56	98.67	252,564.02

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	369.14	203.72	1,163.44	2.65	523.57	100.66	350,314.93

9/20/2010 1:17:40 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	4.09	54.25	32.21	0.00	0.10	0.10	67,574.44
Hearth	1.38	23.64	10.06	0.15	1.91	1.89	30,176.47
Landscaping - No Winter Emissions							
Consumer Products	209.15						
Architectural Coatings	48.49						
TOTALS (lbs/day, unmitigated)	263.11	77.89	42.27	0.15	2.01	1.99	97,750.91

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

9/20/2010 1:17:40 PM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	9.87	11.90	105.37	0.24	50.43	9.54	24,512.80
Apartments high rise	3.31	4.00	35.38	0.08	16.93	3.20	8,230.91
Condo/townhouse general	11.25	13.56	120.11	0.28	57.48	10.88	27,940.85
City park	36.56	42.97	381.25	0.84	176.44	33.35	84,946.83
Strip mall	0.94	1.10	9.78	0.02	4.53	0.86	2,179.29
Office park	41.95	49.75	446.36	0.99	205.22	38.85	99,636.80
General light industry	2.15	2.55	22.92	0.05	10.53	1.99	5,116.54
TOTALS (lbs/day, unmitigated)	106.03	125.83	1,121.17	2.50	521.56	98.67	252,564.02

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	57.50	1.06	dwelling units	2,185.00	2,316.10	29,414.47
Apartments high rise	12.42	1.01	dwelling units	770.00	777.70	9,876.79
Condo/townhouse general	82.50	2.00	dwelling units	1,320.00	2,640.00	33,528.00
City park		62.24	acres	221.80	13,804.83	102,949.54

9/20/2010 1:17:41 PM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		2.86	1000 sq ft	125.00	357.50	2,643.00
Office park		4.76	1000 sq ft	3,000.00	14,280.00	119,694.97
General light industry		2.86	1000 sq ft	255.00	729.30	6,144.35
					34,905.43	304,251.12

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commuter	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS Alt3.urb924

Project Name: HPS Stadium Plan Alternative 3

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	44.45	8.93	6.18	0.00	0.02	0.02	11,135.04

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	17.24	17.25	164.37	0.40	85.45	16.18	41,791.42

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	61.69	26.18	170.55	0.40	85.47	16.20	52,926.46

3/19/2010 11:06:57 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.67	8.91	5.21	0.00	0.02	0.02	11,119.15
Hearth	0.01	0.01	0.00	0.00	0.00	0.00	14.12
Landscape	0.08	0.01	0.97	0.00	0.00	0.00	1.77
Consumer Products	35.71						
Architectural Coatings	7.98						
TOTALS (tons/year, unmitigated)	44.45	8.93	6.18	0.00	0.02	0.02	11,135.04

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

3/19/2010 11:06:57 AM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	2.47	2.20	21.29	0.05	11.13	2.11	5,463.91
Apartments high rise	0.51	0.39	3.80	0.01	1.98	0.38	974.60
Condo/townhouse general	4.10	4.22	40.74	0.10	21.30	4.03	10,456.61
City park	5.82	6.52	60.92	0.15	31.79	6.01	15,459.82
Strip mall	0.17	0.15	1.42	0.00	0.74	0.14	359.66
Office park	3.78	3.42	32.83	0.08	16.79	3.18	8,232.50
General light industry	0.39	0.35	3.37	0.01	1.72	0.33	844.32
TOTALS (tons/year, unmitigated)	17.24	17.25	164.37	0.40	85.45	16.18	41,791.42

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	50.13	1.47	dwelling units	1,905.00	2,800.35	35,564.45
Apartments high rise	8.95	0.90	dwelling units	555.00	499.50	6,343.65
Condo/townhouse general	96.25	3.48	dwelling units	1,540.00	5,359.20	68,061.84
City park		55.71	acres	244.60	13,626.67	101,620.86

3/19/2010 11:06:57 AM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		2.56	1000 sq ft	125.00	320.00	2,365.76
Office park		2.56	1000 sq ft	2,500.00	6,400.00	53,644.80
General light industry		2.56	1000 sq ft	255.00	652.80	5,499.84
					29,658.52	273,101.20

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS Alt3.urb924

Project Name: HPS Stadium Plan Alternative 3

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	243.96	48.99	39.35	0.00	0.13	0.13	60,946.51

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	94.44	85.60	851.09	2.25	468.15	88.58	230,150.78

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	338.40	134.59	890.44	2.25	468.28	88.71	291,097.29

3/19/2010 11:04:21 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	3.69	48.85	28.53	0.00	0.09	0.09	60,926.85
Hearth - No Summer Emissions							
Landscape	0.86	0.14	10.82	0.00	0.04	0.04	19.66
Consumer Products	195.69						
Architectural Coatings	43.72						
TOTALS (lbs/day, unmitigated)	243.96	48.99	39.35	0.00	0.13	0.13	60,946.51

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

3/19/2010 11:04:21 AM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	14.37	10.93	111.26	0.30	60.97	11.54	30,089.84
Apartments high rise	3.10	1.95	19.85	0.05	10.88	2.06	5,367.14
Condo/townhouse general	22.30	20.91	212.93	0.56	116.69	22.09	57,584.76
City park	29.79	32.35	312.56	0.83	174.16	32.92	85,141.76
Strip mall	0.99	0.75	7.26	0.02	4.05	0.77	1,980.76
Office park	21.67	16.97	169.80	0.44	91.97	17.41	45,336.79
General light industry	2.22	1.74	17.43	0.05	9.43	1.79	4,649.73
TOTALS (lbs/day, unmitigated)	94.44	85.60	851.09	2.25	468.15	88.58	230,150.78

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 70 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	50.13	1.47	dwelling units	1,905.00	2,800.35	35,564.45
Apartments high rise	8.95	0.90	dwelling units	555.00	499.50	6,343.65
Condo/townhouse general	96.25	3.48	dwelling units	1,540.00	5,359.20	68,061.84
City park		55.71	acres	244.60	13,626.67	101,620.86

3/19/2010 11:04:21 AM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		2.56	1000 sq ft	125.00	320.00	2,365.76
Office park		2.56	1000 sq ft	2,500.00	6,400.00	53,644.80
General light industry		2.56	1000 sq ft	255.00	652.80	5,499.84
					29,658.52	273,101.20

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS Alt3.urb924

Project Name: HPS Stadium Plan Alternative 3

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	244.39	70.97	37.94	0.14	1.88	1.86	89,162.14

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	94.56	112.49	999.62	2.25	468.15	88.58	226,680.58

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	338.95	183.46	1,037.56	2.39	470.03	90.44	315,842.72

3/19/2010 11:04:49 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	3.69	48.85	28.53	0.00	0.09	0.09	60,926.85
Hearth	1.29	22.12	9.41	0.14	1.79	1.77	28,235.29
Landscaping - No Winter Emissions							
Consumer Products	195.69						
Architectural Coatings	43.72						
TOTALS (lbs/day, unmitigated)	244.39	70.97	37.94	0.14	1.88	1.86	89,162.14

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

3/19/2010 11:04:49 AM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Apartments mid rise	11.93	14.39	127.41	0.30	60.97	11.54	29,637.94
Apartments high rise	2.13	2.57	22.73	0.05	10.88	2.06	5,286.54
Condo/townhouse general	22.84	27.53	243.82	0.56	116.69	22.09	56,719.92
City park	36.09	42.42	376.33	0.83	174.16	32.92	83,850.49
Strip mall	0.84	0.99	8.76	0.02	4.05	0.77	1,950.70
Office park	18.80	22.30	200.05	0.44	91.97	17.41	44,655.15
General light industry	1.93	2.29	20.52	0.05	9.43	1.79	4,579.84
TOTALS (lbs/day, unmitigated)	94.56	112.49	999.62	2.25	468.15	88.58	226,680.58

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	50.13	1.47	dwelling units	1,905.00	2,800.35	35,564.45
Apartments high rise	8.95	0.90	dwelling units	555.00	499.50	6,343.65
Condo/townhouse general	96.25	3.48	dwelling units	1,540.00	5,359.20	68,061.84
City park		55.71	acres	244.60	13,626.67	101,620.86

3/19/2010 11:04:49 AM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Strip mall		2.56	1000 sq ft	125.00	320.00	2,365.76
Office park		2.56	1000 sq ft	2,500.00	6,400.00	53,644.80
General light industry		2.56	1000 sq ft	255.00	652.80	5,499.84
					29,658.52	273,101.20

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS Alt4.urb924

Project Name: HPS Stadium Plan Alternative 4

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	21.50	5.00	3.83	0.00	0.01	0.01	6,183.73

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	11.73	11.91	112.75	0.29	58.52	11.07	28,574.83

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	33.23	16.91	116.58	0.29	58.53	11.08	34,758.56

3/19/2010 12:34:26 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.37	4.98	3.13	0.00	0.01	0.01	6,175.92
Hearth	0.00	0.01	0.00	0.00	0.00	0.00	6.55
Landscape	0.06	0.01	0.70	0.00	0.00	0.00	1.26
Consumer Products	16.56						
Architectural Coatings	4.51						
TOTALS (tons/year, unmitigated)	21.50	5.00	3.83	0.00	0.01	0.01	6,183.73

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Apartments mid rise	2.21	1.91	18.47	0.05	9.66	1.83	4,741.39
City park	5.94	6.67	62.35	0.16	32.53	6.15	15,822.54
Strip mall	0.14	0.12	1.16	0.00	0.60	0.11	294.05
Office park	3.00	2.80	26.84	0.07	13.72	2.60	6,730.71
General light industry	0.44	0.41	3.93	0.01	2.01	0.38	986.14
TOTALS (tons/year, unmitigated)	11.73	11.91	112.75	0.29	58.52	11.07	28,574.83

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	48.82	1.31	dwelling units	1,855.00	2,430.05	30,861.63
City park		65.17	acres	214.00	13,946.38	104,005.12
Strip mall		2.99	1000 sq ft	87.50	261.63	1,934.19
Office park		2.99	1000 sq ft	1,750.00	5,232.50	43,858.81
General light industry		2.99	1000 sq ft	255.00	762.45	6,423.64
					22,633.01	187,083.39

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commuter	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS Alt4.urb924

Project Name: HPS Stadium Plan Alternative 4

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	118.12	27.41	24.87	0.00	0.08	0.08	33,854.68

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	63.61	59.12	581.57	1.54	320.68	60.64	157,366.88

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	181.73	86.53	606.44	1.54	320.76	60.72	191,221.56

3/19/2010 12:33:23 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	2.05	27.31	17.14	0.00	0.05	0.05	33,840.64
Hearth - No Summer Emissions							
Landscape	0.61	0.10	7.73	0.00	0.03	0.03	14.04
Consumer Products	90.75						
Architectural Coatings	24.71						
TOTALS (lbs/day, unmitigated)	118.12	27.41	24.87	0.00	0.08	0.08	33,854.68

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Apartments mid rise	12.97	9.48	96.55	0.26	52.91	10.01	26,110.96
City park	30.39	33.11	319.89	0.85	178.25	33.69	87,139.39
Strip mall	0.77	0.62	5.94	0.02	3.31	0.63	1,619.42
Office park	16.99	13.88	138.83	0.36	75.20	14.23	37,066.37
General light industry	2.49	2.03	20.36	0.05	11.01	2.08	5,430.74
TOTALS (lbs/day, unmitigated)	63.61	59.12	581.57	1.54	320.68	60.64	157,366.88

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 70 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	48.82	1.31	dwelling units	1,855.00	2,430.05	30,861.63
City park		65.17	acres	214.00	13,946.38	104,005.12
Strip mall		2.99	1000 sq ft	87.50	261.63	1,934.19
Office park		2.99	1000 sq ft	1,750.00	5,232.50	43,858.81
General light industry		2.99	1000 sq ft	255.00	762.45	6,423.64
					22,633.01	187,083.39

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0

3/19/2010 12:33:23 PM

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commuter	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS Alt4.urb924

Project Name: HPS Stadium Plan Alternative 4

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	118.11	37.57	21.50	0.07	0.88	0.87	46,934.76

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	65.60	77.60	690.40	1.54	320.68	60.64	154,989.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	183.71	115.17	711.90	1.61	321.56	61.51	201,924.42

3/19/2010 12:34:02 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	2.05	27.31	17.14	0.00	0.05	0.05	33,840.64
Hearth	0.60	10.26	4.36	0.07	0.83	0.82	13,094.12
Landscaping - No Winter Emissions							
Consumer Products	90.75						
Architectural Coatings	24.71						
TOTALS (lbs/day, unmitigated)	118.11	37.57	21.50	0.07	0.88	0.87	46,934.76

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Apartments mid rise	10.35	12.48	110.56	0.26	52.91	10.01	25,718.81
City park	36.94	43.41	385.16	0.85	178.25	33.69	85,817.82
Strip mall	0.69	0.81	7.16	0.02	3.31	0.63	1,594.85
Office park	15.37	18.23	163.56	0.36	75.20	14.23	36,509.07
General light industry	2.25	2.67	23.96	0.05	11.01	2.08	5,349.11
TOTALS (lbs/day, unmitigated)	65.60	77.60	690.40	1.54	320.68	60.64	154,989.66

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	48.82	1.31	dwelling units	1,855.00	2,430.05	30,861.63
City park		65.17	acres	214.00	13,946.38	104,005.12
Strip mall		2.99	1000 sq ft	87.50	261.63	1,934.19
Office park		2.99	1000 sq ft	1,750.00	5,232.50	43,858.81
General light industry		2.99	1000 sq ft	255.00	762.45	6,423.64
					22,633.01	187,083.39

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
City park				5.0	2.5	92.5
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\Admin Draft 2\Urbemis\HPS DEIR-NoProject.urb924

Project Name: HPS Stadium Plan NAA

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	20.70	4.96	3.69	0.00	0.01	0.01	6,140.11

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	8.92	8.94	85.64	0.21	44.38	8.41	21,752.73

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	29.62	13.90	89.33	0.21	44.39	8.42	27,892.84

9/28/2010 8:23:16 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.37	4.95	3.13	0.00	0.01	0.01	6,132.75
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	6.35
Landscape	0.04	0.01	0.56	0.00	0.00	0.00	1.01
Consumer Products	16.07						
Architectural Coatings	4.22						
TOTALS (tons/year, unmitigated)	20.70	4.96	3.69	0.00	0.01	0.01	6,140.11

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Apartments mid rise	4.07	4.10	39.54	0.10	20.67	3.91	10,149.89
Strip mall	1.37	1.36	12.71	0.03	6.64	1.26	3,228.84
Office park	2.87	2.87	27.54	0.07	14.08	2.67	6,907.30
General light industry	0.61	0.61	5.85	0.01	2.99	0.57	1,466.70
TOTALS (tons/year, unmitigated)	8.92	8.94	85.64	0.21	44.38	8.41	21,752.73

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	47.37	2.89	dwelling units	1,800.00	5,202.00	66,065.40
Strip mall		5.04	1000 sq ft	570.00	2,872.80	21,238.61
Office park		4.94	1000 sq ft	1,087.00	5,369.78	45,009.50
General light industry		5.04	1000 sq ft	225.00	1,134.00	9,553.95
					14,578.58	141,867.46

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			

% of Trips - Commercial (by land use)

Strip mall	2.0	1.0	97.0
Office park	48.0	24.0	28.0
General light industry	50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\Admin Draft 2\Urbemis\HPS DEIR-NoProject.urb924

Project Name: HPS Stadium Plan NAA

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	113.77	37.09	21.41	0.06	0.85	0.85	46,310.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	48.85	58.28	518.77	1.17	243.22	46.03	117,991.26

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	162.62	95.37	540.18	1.23	244.07	46.88	164,301.26

9/28/2010 8:22:42 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	2.03	27.14	17.17	0.00	0.05	0.05	33,604.12
Hearth	0.58	9.95	4.24	0.06	0.80	0.80	12,705.88
Landscaping - No Winter Emissions							
Consumer Products	88.06						
Architectural Coatings	23.10						
TOTALS (lbs/day, unmitigated)	113.77	37.09	21.41	0.06	0.85	0.85	46,310.00

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Apartments mid rise	22.17	26.73	236.67	0.55	113.27	21.44	55,056.17
Strip mall	7.55	8.87	78.61	0.17	36.40	6.88	17,512.38
Office park	15.78	18.71	167.85	0.37	77.17	14.61	37,466.92
General light industry	3.35	3.97	35.64	0.08	16.38	3.10	7,955.79
TOTALS (lbs/day, unmitigated)	48.85	58.28	518.77	1.17	243.22	46.03	117,991.26

9/28/2010 8:22:42 AM

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	47.37	2.89	dwelling units	1,800.00	5,202.00	66,065.40
Strip mall		5.04	1000 sq ft	570.00	2,872.80	21,238.61
Office park		4.94	1000 sq ft	1,087.00	5,369.78	45,009.50
General light industry		5.04	1000 sq ft	225.00	1,134.00	9,553.95
					14,578.58	141,867.46

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commuter	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			

% of Trips - Commercial (by land use)

Strip mall	2.0	1.0	97.0
Office park	48.0	24.0	28.0
General light industry	50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolph\Desktop\Division 5026\HuntersPoint\Admin Draft 2\Urbemis\HPS DEIR-NoProject.urb924

Project Name: HPS Stadium Plan NAA

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	113.68	27.22	23.35	0.00	0.07	0.07	33,615.36

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	48.91	44.32	444.60	1.17	243.22	46.03	119,793.94

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	162.59	71.54	467.95	1.17	243.29	46.10	153,409.30

9/28/2010 8:21:57 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	2.03	27.14	17.17	0.00	0.05	0.05	33,604.12
Hearth - No Summer Emissions							
Landscape	0.49	0.08	6.18	0.00	0.02	0.02	11.24
Consumer Products	88.06						
Architectural Coatings	23.10						
TOTALS (lbs/day, unmitigated)	113.68	27.22	23.35	0.00	0.07	0.07	33,615.36

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 35% to 0%

Percentage of residences with wood fireplaces changed from 10% to 0%

Percentage of residences with natural gas fireplaces changed from 55% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Apartments mid rise	22.40	20.30	206.68	0.55	113.27	21.44	55,895.65
Strip mall	7.51	6.76	65.17	0.17	36.40	6.88	17,782.25
Office park	15.68	14.24	142.47	0.37	77.17	14.61	38,038.85
General light industry	3.32	3.02	30.28	0.08	16.38	3.10	8,077.19
TOTALS (lbs/day, unmitigated)	48.91	44.32	444.60	1.17	243.22	46.03	119,793.94

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2030 Temperature (F): 70 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Apartments mid rise	47.37	2.89	dwelling units	1,800.00	5,202.00	66,065.40
Strip mall		5.04	1000 sq ft	570.00	2,872.80	21,238.61
Office park		4.94	1000 sq ft	1,087.00	5,369.78	45,009.50
General light industry		5.04	1000 sq ft	225.00	1,134.00	9,553.95
					14,578.58	141,867.46

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.1	0.0	100.0	0.0
Light Truck < 3750 lbs	12.5	0.0	99.2	0.8
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	34.4	65.6	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commuter	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	100.0	0.0	0.0			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS 93 ExConditionv2.urb924

Project Name: Hunters Point Shipyard 1993 Conditions

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	1.44	1.18	1.81	0.00	0.00	0.00	1,404.31

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	1.44	1.18	1.81	0.00	0.00	0.00	1,404.31

3/19/2010 2:52:05 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.08	1.17	0.98	0.00	0.00	0.00	1,403.07
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.07	0.01	0.83	0.00	0.00	0.00	1.24
Consumer Products	0.00						
Architectural Coatings	1.29						
TOTALS (tons/year, unmitigated)	1.44	1.18	1.81	0.00	0.00	0.00	1,404.31

Area Source Changes to Defaults

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS 93 ExConditionv2.urb924

Project Name: Hunters Point Shipyard 1993 Conditions

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	7.55	6.41	5.38	0.00	0.01	0.01	7,688.04

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	7.55	6.41	5.38	0.00	0.01	0.01	7,688.04

3/19/2010 2:49:40 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.47	6.41	5.38	0.00	0.01	0.01	7,688.04
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions							
Consumer Products	0.00						
Architectural Coatings	7.08						
TOTALS (lbs/day, unmitigated)	7.55	6.41	5.38	0.00	0.01	0.01	7,688.04

Area Source Changes to Defaults

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\randolphg\Desktop\Division 5026\HuntersPoint\URBEMIS\HPS 93 ExConditionv2.urb924

Project Name: Hunters Point Shipyard 1993 Conditions

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	8.36	6.50	14.56	0.00	0.03	0.03	7,701.84

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	8.36	6.50	14.56	0.00	0.03	0.03	7,701.84

3/19/2010 2:49:14 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.47	6.41	5.38	0.00	0.01	0.01	7,688.04
Hearth - No Summer Emissions							
Landscape	0.81	0.09	9.18	0.00	0.02	0.02	13.80
Consumer Products							
Architectural Coatings	7.08						
TOTALS (lbs/day, unmitigated)	8.36	6.50	14.56	0.00	0.03	0.03	7,701.84

Area Source Changes to Defaults