Operations Emissions Summary

	Peak Day Emissions						Annual Emissions					
	NOx	ROC	CO	SO_2	PM_{10}	$PM_{2.5}$	NOx	ROC	CO	SO_2	PM_{10}	$PM_{2.5}$
Baseline Operations												
EOF	44	510	105	22	9	9	5.0	84	18	3.6	1.4	1.4
Platform Holly, Operations	19	483	677	24	25	25	1.0	53	2.2	0.1	0.2	0.2
Platform Holly, Drilling	66	14	50	2	10	10	2.3	0.8	2.9	0.1	0.5	0.5
Crew, Supply Boats and Helicopters	631	24	95	63	42	39	32	1.7	5.1	3.2	1.8	1.8
Mobile Emissions	12.3	0.7	7.9	0.0	0.2	0.2	1.3	0.1	0.9	0.0	0.0	0.0
Total Current Operations	***772***	***1032***	***935***	***111***	***86***	***83***	***42***	***139***	***29***	***7.1***	***4.0***	***4.0***
Proposed Operations												
EOF	63	372	233	40	14	14	8	59	40	7	2	2
Platform Holly, Operations	19	483	677	24	25	25	1	53	2	0.1	0.2	0.2
Platform Holly, Drilling	76	19	68	3	13	13	6	2	8	0	1	1
Crew and Supply Boats	631	24	95	63	42	39	50	2	8	5	3	3
Mobile Emissions	15	1	8	0	0	0	2	0	1	0	0	0
Total Proposed Operations	***804***	***899***	***1081***	***130***	***93***	***91***	***67***	***116***	***59***	***12***	***7***	***7***
Total Baseline Operations	772	1032	935	111	86	83						
Total Increase	**32**	**-133**	**147**	**19**	**7**	**7**	**25**	**-23**	**30**	**5**	**3**	**3**
Threshold	55	55	-	55	80	80	-	-	-	-	-	-
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	-	-	-	-	-	-

Mobile Emissions Summary

	Peak Day Emissions						Annual Emissions					
Source	NOx	ROC	CO	SO_2	PM_{10}	$PM_{2.5}$	NOx	ROC	CO	SO_2	PM_{10}	$PM_{2.5}$
Baseline Emissions	5.2	0.3	3.2	0.0	0.1	0.1	0.9	0.0	0.6	0.0	0.0	0.0
Baseline Emissions Drilling Only	7.1	0.4	4.6	0.0	0.1	0.1	0.5	0.0	0.3	0.0	0.0	0.0
Proposed Project Emissions	7.7	0.4	3.6	0.0	0.2	0.1	1.3	0.1	0.6	0.0	0.0	0.0
Proposed Project Emissions Drilling only	7.1	0.4	4.6	0.0	0.1	0.1	0.9	0.1	0.6	0.0	0.0	0.0

Construction Emissions Summary

	Peak Day Emissions						Total Emissions					
	NOx	ROC	CO	SO_2	PM_{10}	$PM_{2.5}$	NOx	ROC	CO	SO_2	PM_{10}	$PM_{2.5}$
Supply Boats and Barge	284.86	8.53	39.76	28.61	16.09	15.94	2.35	0.07	0.33	0.24	0.13	0.13
Holly Equipment	114.36	9.45	33.24	9.60	7.21	7.15	3.43	0.28	1.00	0.29	0.22	0.21
Offsite Vehicles	13.91	0.70	3.57	0.02	0.25	0.24	0.02	0.00	0.02	0.00	0.00	0.00
Total	**399.22**	**17.98**	**73.00**	**38.20**	**23.30**	**23.09**	**5.78**	**0.35**	**1.32**	**0.52**	**0.35**	**0.35**
Threshold							25	25	-	25	25	25
Exceeds Threshold?							No	No	-	No	No	No

GHG Emissions Summary

Current Electrical Use

Location	MWH/yr	EF, MTCO2e/ MWH	MT CO2e/Yr
EOF Usage	31,704	0.285	9,036
Holly Usage	23,178	0.285	6,606
Total			15,641

EOF usage based on 31.7 gwh/yr average from Project Description
Holly usage based on 63.5 MWh/day average from Project Description
Average Load, kW 6265
Average Use, MWH/day
EF from CalEEMod for SCE

Current Greenhouse Gas Emissions, MT/yr

Source	CO2e, MT/Yr
Direct Emissions	
Holly	
Combustion	452
Combustion - flare	279
Crew and Supply Boats	1,216
Fugitives	1,588
Drilling	1,504
Others	0
Platform Holly Emissions Total	5,039
EOF	
Combustion	2,901
Combustion - flares	13,693
Fugitives	1,763
Other	5
EOF total	18,361
Total Direct Emissions	**23,401**
Indirect Emissions	
Electrical Generation	15,641
Offsite Vehicles	207
Total Indirect Emissions	**15,848**
Total GHG Emissions	**39,249**
Non-C&T Sources, tons/yr CO2-e	**22,180**

Project Electrical Use

Location	MWH/yr	EF, tons/MWH	Tons CO2/Yr
EOF Usage	32,605	0.285	9,293
Holly Usage	24,762	0.285	7,057
Total			16,350

EOF increased load, kW (89.33 MWh/day) 103
Holly increased load, kW (67.84 Mwh/day) 181
Average Load, kW 6549
as per Venoco information submittals
EF from CalEEMod for SCE

Project Greenhouse Gas Emissions, tons/yr

Source	CO2e, MT/Yr
Direct Emissions	
Construction Total	290.5
Holly	
Combustion	452
Combustion - flare	279
Crew and Supply Boats	1,849
Fugitives	1,588
Drilling	4,150
Others	0
Holly total	8,318
EOF	
Combustion	14,533
Combustion - flares	16,760
Fugitives	1,086
Other	5
EOF total	32,384
Total Direct Emissions	**40,992**
Indirect Emissions	
Electrical Generation	16,350
Offsite Vehicles	488
Total Indirect Emissions	**16,838**
Total GHG Emissions (includes baseline)	**57,830**
Non-C&T Sources, tons/yr CO2-e	**38,848**
Net Increase/Decrease, tons/yr CO2-e	**18,581**
Increase in Non-C&T Sources, tons/yr CO2-e	**16,668**

GHG Carbon Intensity

as per USEPA Mandatory reporting Rule

Inputs	InPlant Fuel Gas	Flare Gas	1st Stage Permeate	Holly Gas, 2006	Holly Gas, 2015
Unit destruction efficiency, fraction	0.999	0.999	0.999	0.999	0.999
Volume of gas sent to unit, scf	1.00E+09	1.00E+09	1.00E+09	1.00E+09	1.00E+09
Concentration of gas hydrocarbon constituents	1.183319722	0.687827072	0.650949214	1.1154	1.2781
Mole fraction CO2 in fuel gas	0.149219154	0.368371054	0.384952581	0.182	0.1805
Mole fraction CH4 in fuel gas	0.592959883	0.583597213	0.576795506	0.6398	0.6086
HHV of gas, btu/scf	1127	679.28	647	1060	1060
Outputs					
GHG (CO2 combusted)	63,599	36,968	34,986	59,949	68,693
GHG (CO2 uncombusted)	8028.0	19818.4	20710.4	9791.6	9710.9
GHG (CH4)	290.6	286.0	282.6	313.5	298.2
GHG (N2O)	33.6	20.2	19.3	31.6	31.6
Total	71,951	57,093	55,998	70,085	78,734
GHG EF, MTCO2e/mmscf	71.95106	57.09266	55.99841	70.08520	78.73372
GHG EF, MTCO2e/mmbtu	0.06384	0.08405	0.08655	0.06612	0.07428
GHG EF, lbs CO2/mmbtu	139.8	183.9	189.4	144.7	162.7
GHG EF, lbs CH4/mmbtu	0.02269	0.03705	0.03844	0.02603	0.02476
GHG EF, lbs N2O/mmbtu	0.00022	0.00022	0.00022	0.00022	0.00022
Gas Composition					
Constituent	Mole Percent	Mole Percent	Mole Percent	Mole Percent	Mole Percent
O2	0.013	0.112	0.118	0.08	0
N2	0.332	0.455	0.430	0.34	0.21
H2					
CO					
CO2	14.922	36.837	38.495	18.2	18.05
CH4 (Methane)	59.296	58.360	57.680	63.98	60.86
C2H6 (Ethane)	18.617	2.847	2.528	6.33	6.74
C2H4 (Ethene)					
C3H8 (Propane)	5.623	0.955	0.635	5.29	6.33
I-C4H10 (i-Butane)	0.392	0.103	0.040	1.05	1.67
n-C4H10 (n-Butane)	0.660	0.207	0.073	1.92	2.9
I-C5H12 (i-Pentane)	0.060	0.060	0.000	0.76	1.780
n-C5H12 (n-Pentane)	0.033	0.033	0.000	0.51	1.050
C6H14 (Hexane+)	0.052	0.032	0.000	0.16	0.410
Concentration of gas hydrocarbon constituents	1.183	0.688	0.651	1.115	1.278

South Ellwood Air Emissions: 2014 Operations
EOF Facilities

									Operating Schedule						
Equipment Category	**Code**	**Description**	**Fuel or Service**	**Parameter**	**Size**	**Units**	**Capacity**	**Units**	**Actual Annual Use**	**Units**	**Peak Day Use**	**Units**	**Peak Day Hours**	**Yearly Days**	**Load**
				S, ppmv											
Combustion-External	EOF-H201	Heater Treater H-201	Fuel Gas	80	4.399	MMBtu/hr	4.399	MMBtu/hr	3	mmbtu	3.0	mmbtu/day	0.68	0.03	0.00
	EOF-H202	Heater Treater H-202	Fuel Gas	80	2.464	MMBtu/hr	2.464	MMBtu/hr	0	mmbtu	0.0	mmbtu/day	0.00	0.00	0.00
	EOF-H203	Heater Treater H-203	Fuel Gas	80	4.399	MMBtu/hr	4.399	MMBtu/hr	20	mmbtu	20.0	mmbtu/day	4.55	0.19	0.00
	EOF-H204	Process Heater H-204	FG/Permeate	239	25.000	MMBtu/hr	25.000	MMBtu/hr	39,844	mmbtu	109.2	mmbtu/day	24.00	365	0.18
Combustion: Flares	EOF-H205pi	Thermal Oxidizer H-205, Pilot	Fuel Gas	205	-	MMBtu/hr	-	MMBtu/hr	0	mmbtu	0	mmbtu/day	0.00	0.00	1.00
	EOF-H205p	Thermal Oxidizer H-205, Planned	FG/Permeate	205	35.00	MMBtu/hr	35.000	MMBtu/hr	160,361	mmbtu	468.9	mmbtu/day	24.00	342	0.52
	EOF-H205u	Thermal Oxidizer H-205, Unplanned	FG/Permeate	15,000	140.00	MMBtu/hr	140.000	MMBtu/hr	53	mmbtu	53.0	mmbtu/day	0.38	0.02	0.00
	EOF-H206pi	Thermal Oxidizer H-206, Pilot	Fuel Gas	205	0.34	MMBtu/hr	0.34	MMBtu/hr	2,988	mmbtu	8.2	mmbtu/day	24.00	365	1.00
	EOF-H206p	Thermal Oxidizer H-206, Planned	Permeate	205	30.00	MMBtu/hr	30.00	MMBtu/hr	3,266	mmbtu	9.5	mmbtu/day	24.00	342	0.01
	EOF-H206u	Thermal Oxidizer H-206, Unplanned	Permeate	15,000	220.00	MMBtu/hr	220.00	MMBtu/hr	48	mmbtu	48.0	mmbtu/day	0.22	0.01	0.00
	EOF-H207pi	Thermal Oxidizer H-207, Pilot	Fuel Gas	205	1.00	MMBtu/hr	1.00	MMBtu/hr	8,771	mmbtu	24.0	mmbtu/day	24.00	365	1.00
	EOF-H207p	Thermal Oxidizer H-207, Planned	Permeate	205	30.00	MMBtu/hr	30.00	MMBtu/hr	8,771	mmbtu	25.6	mmbtu/day	24.00	342	0.03
	EOF-H207u	Thermal Oxidizer H-207, Unplanned	Permeate	15,000	30.00	MMBtu/hr	30.00	MMBtu/hr	83	mmbtu	83.0	mmbtu/day	2.77	0.12	0.00
				RVP											
Oil Storage Tanks	EOF-T202	Oil Tank T-202	Oil	4.8	35'd x 16'h	feet	3,762	bbl/day	5.77E+07	gal/yr	-	-	24.0		1.00
	EOF-T203	Oil Tank T-203	Oil	4.8	35'd x 16'h	feet	3,762	bbl/day	5.77E+07	gal/yr	-	-	24.0		1.00
	EOF-T204	Oil Tank T-204	Oil	4.8	30'd x 24'h	feet	-	bbl/day	0.00E+00	gal/yr	-	-	24.0		1.00
	EOF-T101	EB Tank T-101	HC	1.5	12'd x 20'h	feet	-	bbl/day	0.00E+00	gal/yr	-	-	24.0		1.00
				psig											
Pigging Equipment	EOF-PROE	Receiver: oil emulsion	oil	1	0.33'd x 4.5'l	feet	1.13	acf-event	79	events/yr	1.00	events/dy	1.0	79.0	-
	EOF-PRU	Receiver: utility	gas or oil	1	0.33'd x 4.5'l	feet	1.13	acf-event	2	events/yr	1.00	events/dy	1.0	2.0	-
	EOF-PRPG	Receiver: produced gas	gas	1	0.33'd x 4.5'l	feet	1.13	acf-event	49	events/yr	1.00	events/dy	1.0	49.0	-
	EOF-PLSG	Launcher: seep gas	gas	1	0.33'd x 4.5'l	feet	1.13	acf-event	0	events/yr	1.00	events/dy	1.0	0.0	-
	EOF-PRAAPL	Reciever: EOF to AAPL (at SYU)	oil	1	0.83'd x 12'l	feet	9.24	acf-event	12	events/yr	1.00	events/dy	1.0	12.0	-
	EOF-PLAAPL	Launcher: EOF to AAPL	oil	1	0.67'd x 12'l	feet	5.21	acf-event	12	events/yr	1.00	events/dy	1.0	12.0	-
Sump/Wastewater Tanks	EOF-S202	Sump Tank S-202	W/W	sec/VRS	6.5'dia	feet	33.18	sq. ft.	33.2	sq. ft.	-	-	24.0	365	-
	EOF-TK201	Wash Tank TK-201	W/W	sec/VRS	30.0' dia	feet	706.86	sq. ft.	706.9	sq. ft.	-	-	24.0	365	-
	EOF-S203	Oil Sump S-203	oil		7' dia	feet	38.48	sq. ft.	38.5	sq. ft.	-	-	24.0	365	-
Loading Racks	EOF-RACKLPG	Rack - LPG	LPG/NGL	balanced	125	loading/yr	10	kgal/hr	1111.8	kgal/yr	8894	gal/day	0.89	125	-
	EOF-RACKNLG	Rack - NGL	LPG/NGL	balanced	1	loading/yr	10	kgal/hr	8.4	kgal/yr	8442	gal/day	0.84	1	-
	EOF-RACKEB	Rack - Emulsion Breaker	HC Liq.	submerged	0	loading/yr	6.72	kgal/hr	0	kgal/yr	0	gal/day	0	0	-
Fugitive Cmpnnts, Gas/LL	EOF-FUGG-VALVES	Valves: Accessible	Gas/Lt. Liq.	-	3519	comp-lp	3519	comp-lp			-	-	24.0	365	-
	EOF-FUGG-VALVESi	Valves: Inaccessible	Gas/Lt. Liq.	-	4	comp-lp	4	comp-lp			-	-	24.0	365	-
	EOF-FUGG-VALVESU	Valves: Unsafe	Gas/Lt. Liq.	-	6	comp-lp	6	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CONN	Connectors: Accessible	Gas/Lt. Liq.	-	19,406	comp-lp	19406	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CONNi	Connectors: Inaccessible	Gas/Lt. Liq.	-	2,327	comp-lp	2327	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CONNu	Connectors: Unsafe	Gas/Lt. Liq.	-	78	comp-lp	78	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CS	Compressor Seal	Gas/Lt. Liq.	-	20	comp-lp	20	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PRV	Press. Relief Valves: Accessible	Gas/Lt. Liq.	-	7	comp-lp	7	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PRVi	Press. Relief Valves: Inaccessible	Gas/Lt. Liq.	-	-	comp-lp	0	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PRVu	Press. Relief Valves: Unsafe	Gas/Lt. Liq.	-	-	comp-lp	0	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PS	Pump Seal	Gas/Lt. Liq.	-	10	comp-lp	10	comp-lp			-	-	24.0	365	-
				sub-total =	**25,377**		**25,377**								
Fugitive Cmpnnts, Oil	EOF-FUGO-VALVES	Valves: Accessible	Oil	-	647	comp-lp	647	comp-lp			-	-	24.0	365	-
	EOF-FUGO-VALVES	Valves: Accessible Cat E	Oil	-	73	comp-lp	73	comp-lp			-	-	24.0	365	-
	EOF-FUGO-CONN	Connectors: Accessible	Oil	-	3,120	comp-lp	3,120	comp-lp			-	-	24.0	365	-
	EOF-FUGO-CONN	Connectors: Accessible Cat E	Oil	-	314	comp-lp	314	comp-lp			-	-	24.0	365	-
	EOF-FUGO-CONNu	Connectors: Unsafe	Oil	-	-	comp-lp	-	comp-lp			-	-	24.0	365	-
	EOF-FUGO-PRV	Press. Relief Valves: Accessible	Oil	-	-	comp-lp	-	comp-lp			-	-	24.0	365	-
	EOF-FUGO-PS	Pump Seal	Oil	-	7	comp-lp	7	comp-lp			-	-	24.0	365	-
				sub-total =	**4,161**		**4,161**								
Solvent/Coatings	EOF-SOL	Cleanin/Degreasing	-	-	20.00	gal/yr	3.70	gal/day avg	790	g/l	3.70	gal/day	1	365	-
	EOF-SCOAT	Surface Coating	-	-	28.0	gal/yr	11.20	gal/day avg	250	g/l	11.20	gal/day	1	365	-
Other Equipment	EOF-EFP	Emergency Fire Pump	CARB Diesel		292	bhp	26	Hours/yr	28.9	mmbtu/yr	0.56	mmbtu/day	0.50	26.00	0.54
	EOF-EG	Emergency Generator	CARB Diesel		509	bhp	12	Hours/yr	32.9	mmbtu/yr	2.74	mmbtu/day	1.00	12.00	0.77
TOTAL EOF Emissions															

South Ellwood Air Emissions: 2014 Operations
Platform Holly Facilities

									Operating Schedule						
Equipment Category	**Code**	**Description**	**Fuel or Service**	**Parameter**	**Size**	**Units**	**Capacity**	**Units**	**Actual Total Use**	**Units**	**Peak Day Use**	**Units**	**Peak Day Hours**	**Yearly Days**	**Load**
Combustion: Flare	HOLLY-FLAREpi	Flare Planned - Pilot	Fuel Gas	-	200	scfh	0.220	MMBtu/hr	964	mmbtu	2.6	mmbtu/day	24.00	365.00	0.50
	HOLLY-FLAREp	Flare Planned - Purge	Fuel Gas	-	2100	scfh	2.310	MMBtu/hr	3,236	mmbtu	8.9	mmbtu/day	24.00	365.00	0.16
	HOLLY-FLAREpu	Flare Planned - LP Purge	Fuel Gas	-	300	scfh	0.330	MMBtu/hr	209	mmbtu	0.6	mmbtu/day	24.00	365.00	0.07
	HOLLY-FLAREi	Flare Planned - Intermittent	Holly Gas	-	0	scfh	0.000	MMBtu/hr	0	mmbtu	0.0	mmbtu/day	0.00	0.00	0.00
	HOLLY-FLAREu	Flare Unplanned	Holly Gas	-	480000	scf/yr	528.000	MMBtu/hr	8.6	mmbtu	8.6	mmbtu/day	0.02	0.00	0.00
Fugitive Cmpnnts	HOLLY-FUGO	Oil, controlled	Oil	-	3992	comp-lp	-	-			-	-	24.0	365	-
	HOLLY-FUGOu	Oil, unsafe	Oil	-	14	comp-lp	-	-			-	-	24.0	365	-
	HOLLY-FUGG	Gas, controlled	Gas	-	14067	comp-lp	-	-			-	-	24.0	365	-
	HOLLY-FUGGu	Gas, unsafe	Gas	-	964	comp-lp	-	-			-	-	24.0	365	-
				sub-total =	19037										
Pigging Equip.	HOLLY-PIGO	Oil Launcher	Gas	-	5.00	psi	1.40	ft3	79	events/yr	1.00	events/dy	1.0	79.0	-
	HOLLY-PIGU	Utility Gas Launcher	Gas	-	5.00	psi	1.40	ft3	2	events/yr	1.00	events/dy	1.0	2.0	-
	HOLLY-PIGG	Gas Launcher	Gas	-	5.00	psi	1.40	ft3	49	events/yr	1.00	events/dy	1.0	49.0	-
Sumps/Tanks/Separators	HOLLY-T1	Oil surge tank (T-1)	-	-	44.2	ft2	-	-			-	-	24.0	365	-
	HOLLY-T4	Overflow sump tank (T-4)	-	-	113.2	ft2	-	-			-	-	24.0	365	-
Solvent/Coatings	HOLLY-SOL	Cleanin/Degreasing	-	-	177.6	gal/yr	32.89	gal/day avg	250	g/l	32.89	gal/day	1	365	-
	HOLLY-SCOAT	Surface Coating	-	-	229	gal/yr	91.60	gal/day avg	250	g/l	91.60	gal/day	1	365	-
Boom Boat	HOLLY-BB	Boom Boat	Gasoline	-	225	bhp-total	0.1	gal/hp-hr	1.5	hrs/yr	1.5	hrs/day	1.5	1	0.65
ICEs	HOLLY-EG	Backup Emergency Generator	D2	-	373.00	bhp	21.2	gallons/hr	0.09	kgal/yr	0.030	kgal/day	0.25	3	0.00
	HOLLY-CRANE	Pedestal Crane	D2	-	250.00	bhp	14.1	gallons/hr	8.311	kgal/yr	0.083	kgal/day	5.9	298	0.34
	HOLLY-DGEN1	Generator 1, NSCR, well maintenance	NG	-	803	hp	7.59	mmbtu/hr	1,662	mmbtu	4.6	mmbtu/day	24	365	0.025
	HOLLY-DGEN2	Generator 2, NSCR, well maintenance	NG	-	803	hp	7.59	mmbtu/hr	1,662	mmbtu	4.6	mmbtu/day	24	365	0.025
	HOLLY-DGEN3	Generator 3, NSCR, well maintenance	NG	-	1053	hp	8.10	mmbtu/hr	1,774	mmbtu	4.9	mmbtu/day	24	365	0.025
Supply Boat	HOLLY-SBmain	Supply Boat Main Engines	D2	-	4920.00	bhp-total	270.10	gal/hr	53.3	kGal/yr	961	gal/day	3.6	239	0.65
	HOLLY-SBgen	Supply Boat Generator Engines	D2	-	530.00	bhp-total	29.10	gal/hr	0	kGal/yr	0	gal/day	0.0	239	0.50
	HOLLY-SBBT	Supply Boat Bow Thruster	D2	-	530.00	bhp-total	29.10	gal/hr	0	kGal/yr	0	gal/day	0.0	239	0.50
Crew Boat	HOLLY-CBM	Crew Boat Main Engines	D2	-	1605.00	bhp-total	81.70	gal/hr	50.9	kGal/yr	160.4	gal/day	2.0	365	0.85
	HOLLY-CBA	Crew Boat Auxillary Engines	D2	-	131.00	bhp-total	7.20	gal/hr	0	kGal/yr	0	gal/day	0.0	365	0.50
Helicopters	HOLLY-HELIO	Heliocopter	AG	-			20.79	gal/RT Flight	2	flights/yr					
Total Platform Holly															

Platform Holly Drilling Equipment

								Operating Schedule							
Equipment Category		**Description**	**Fuel or Service**	**Size**	**Units**	**Capacity**	**Units**	**Actual Total Use**	**Units**	**Actual Total Gallons**	**Peak Day Use**	**Units**	**Peak Day Hours**	**Hrs/ well or Yearly Days**	**Ann. Avg Load**
ICEs	HOLLY-DCRANE	Crane	D2	92	hp	4.7	gallons/hr	126	mmbtu/yr	927	-	-	8	675	0.29
	HOLLY-DELU	Electric Line Unit	D2	121	hp	0.0	electric	0	mmbtu/yr	0	-	-	0	48	0.42
	HOLLY-DSLU	Slick Line Unit	D2	90	hp	0.0	electric	0	mmbtu/yr	0	-	-	4	48	0.42
	HOLLY-DHU	Hydraulic Unit for Casing Tongs	D2	90	hp	0.0	electric	0	mmbtu/yr	0	-	-	4	405	0.42
	HOLLY-DCTU	Coil Tubing Unit	D2	210	hp	0.0	electric	0	mmbtu/yr	0	-	-	0	540	0.42
	HOLLY-DCU	Cement Unit	D2	335	hp	17.1	gallons/hr	95	mmbtu/yr	695	-	-	8	96	0.42
	HOLLY-DC	Compressor	D2	110	hp	0.0	electric	0	mmbtu/yr	0	-	-	2	1350	0.42
	HOLLY-DNU	Nitrogen Unit	D2	345	hp	0.0	electric	0	mmbtu/yr	0	-	-	0	48	0.42
	HOLLY-DWKP	Well Kill Pump ICE	D2	110	hp	5.6	gallons/hr	16	mmbtu/yr	114	-	-	0	48	0.42
	HOLLY-DDGEN1	Generator 1, NSCR, well drilling	NG	803	hp	7.59	mmbtu/hr	5,738	mmbtu/yr	-	51.0	mmbtu/day	24	112.5	0.09
	HOLLY-DDGEN2	Generator 2, NSCR, well drilling	NG	803	hp	7.59	mmbtu/hr	5,738	mmbtu/yr	-	51.0	mmbtu/day	24	112.5	0.09
	HOLLY-DDGEN3	Generator 3, NSCR, well drilling	NG	1053	hp	8.10	mmbtu/hr	6,124	mmbtu/yr	-	54.4	mmbtu/day	24	112.5	0.09
TOTAL Drilling															

South Ellwood Air Emissions: 2014 Operations

NOTES

1) Daily average crude oil production, 2014 CVR average, bopd	3,935		
2) Daily average gas production, 2014 CVR average, mscfd	2,954		
3) LPG/NGL production annual, gallons, 2014 production, CVR 2014	3,291,582		
4) Fraction LPG, from CVR 2014	0.723		
5) Wells drilled, number	1		
6) Time per well drilled, days (135 days to drill 1.2 wells, as per Applicant)	112.5		
7) Estimated total annual fuel use, gas, mmbtu, EOF + Holly	233,724	mmbtu/yr	
8) EOF Heaters and flare total (baseline annual total of 224,248 mmbtu)	224,208	mmbtu/yr	
9) DPM PM2.5/PM10 ratio, SCAQMD CEIDARS	0.991	Distillate non-electrical generation, PM2.5/PM10 fraction	
10) Total makeup gas to H-205, mmbtu/yr, 2014	75,000	based on CVR 2014 average to H-205	47%

10) Supply boat baseline days per year (based on 2014 use) of 239
11) Drilling ICE's gallons/hour values are calculated from the horsepowers of these engines using EPA AP-42 conversion factors
12) Peak EOF day includes all equipment except H-205, 206 and 207 unplanned
13) All other peak day emissions from EMT or Holly include all equipment
14) LPG shipments based on 2014 activity. Assumes worst case 2 on peak day LPG, 1 for NGL
15) EOF LPG loading based on LPG production and loading records from CVR. Different from loading value in the air emissions in CVR
16) Heater and Flare GHG emission factors based on MRR methodology and fuel analysis data average for 6 mo in 2014
17) H-204 GHG emissions based on permeate and fuel gas combined (2014 indicated about 94.3% permeate, remaining fuel gas)
18) H-204 and H-205 assumed to operate a partial load continuously
19) H-205 based on CVR about 50% mix of permeate and fuel gas
20) H-206/207 GHG emissions based on all permeate gasses
21) Diesel combustion GHG EF based on 40 CFR part 98.30 Tables C-1 and C-2 with AP-42 factors for diesel density
22) Helicopter emissions based on CVR for Nox, ROC and CO. SOX and PM based on EPA Aviation ratioed to Nox emissions. GHG emissions based on fuel use and 40 CFR part 98
23) Fire water pump and back generator hours per year based on 2014 testing schedule of 30 minutes/week and 30 minutes/month, respectively
24) Pedestal crane based on actual 2014 fuel use and hours of operation. Worst case day in 2014 was 19 hours. Assumed 24 hours on peak day.
25) Holly Drill generators utilized for well maintenance and well drilling. Well maintenance based on Jan-June 2015 drill generator use (no drilling occuring). Drilling use based on 2014, when 1 well was drilled, minus well maintenance
26) Pedestal crane annual days and hours/day based on 2014 actual usage
27) Crew boat daily hours per day based on average daily fuel use in 2014 and hourly fuel use number
28) Loading rack ROC emission factor was correct to be 4.8 lb ROC/kgal transferred with a 95% vapor recovery efficiency (0.24). Corrected again by SBCAPCD spreadsheets.
29) Supply boat average daily fuel use based on 2014 days and fuel use. Peak day of 718 gallons on Aug 13, 2014
30) Solvent and surface coating daily use fraction of annual use based on SBCAPCD spreadsheets

31) Platform Holly drilling generators peak day load average	0.28
32) Holly diesel fuel use, crane plus drilling	10,137

33) Fire water pump and back generator fuel use during testing based on 2008 ATEIR, of 8.1 gal/hr and 20 gal/hr, respectively, as specified by Applicant
34) Fire water pump and back generator annual btu use based on AP-42 diesel energy density of 19300 btu/lb and 7.1 lb/gal diesel, and the Applicant specified testing schedule
35) Crew boat assumes 15% increase in fuel use during drilling. Annual use based on 2014 (with 1 welldrilled) -->a no wells drilled year generates 48.3 kgal/yr
36) Holly fugitive counts based on Permit 8234-06 with revisions to gas and oil component counts to 15,031 and 4,006, respectively, for all safe and unsafe components
37) EOF Fugitive gas components relief valves updated based on Venoco data of PRDs going to flare/VRU/process. Only TK-201/202/203/204 and V-241(3) go to atm
38) Platform drill generators maintenace (non-drilling) load based on historical 2011-2014 maintenace average yearly load of 2.5%
39) Platform drill generators drilling load based on historical 2014 load of 28% while drilling

South Ellwood Air Emissions: 2014 Operations
EOF Facilities

			Emission Factors											Hourly Emissions, lbs/hr					
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**Sox**	**PM10**	**PM2.5**	**CO2**	**N2O**	**CH4**	**Units**	**EF Source**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Combustion-External	EOF-H201	Heater Treater H-201	0.098	0.005	0.082	0.012	0.0070	0.0070	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.29	0.02	0.25	0.04	0.02	0.02
	EOF-H202	Heater Treater H-202	0.098	0.005	0.082	0.012	0.0070	0.0070	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.00	0.00	0.00	0.00	0.00	0.00
	EOF-H203	Heater Treater H-203	0.098	0.005	0.082	0.012	0.0070	0.0070	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.43	0.02	0.36	0.05	0.03	0.03
	EOF-H204	Process Heater H-204	0.036	0.005	0.297	0.037	0.0070	0.0070	186.17	0.0002	0.03742	lb/MMBtu	PTO 7904.R10	0.90	0.13	7.43	0.93	0.18	0.18
Combustion: Flares	EOF-H205pi	Thermal Oxidizer H-205, Pilot	0.040	0.003	0.100	0.031	0.0140	0.0140	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.00	0.00	0.00	0.00	0.00	0.00
	EOF-H205p	Thermal Oxidizer H-205, Planned	0.040	0.003	0.100	0.031	0.0140	0.0140	164.12	0.0002	0.03041	lb/MMBtu	PTO 7904.R10	1.40	0.09	3.50	1.07	0.49	0.49
	EOF-H205u	Thermal Oxidizer H-205, Unplanned	0.040	0.003	0.100	1.470	0.0140	0.0140	164.12	0.0002	0.03041	lb/MMBtu	PTO 7904.R10	2.12	0.14	5.30	77.91	0.74	0.74
	EOF-H206pi	Thermal Oxidizer H-206, Pilot	0.070	0.003	0.370	0.031	0.0140	0.0140	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.02	0.00	0.13	0.01	0.00	0.00
	EOF-H206p	Thermal Oxidizer H-206, Planned	0.098	0.005	0.370	0.031	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	2.94	0.16	11.10	0.92	0.42	0.42
	EOF-H206u	Thermal Oxidizer H-206, Unplanned	0.098	0.005	0.370	1.470	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	4.70	0.26	17.76	70.56	0.67	0.67
	EOF-H207pi	Thermal Oxidizer H-207, Pilot	0.070	0.003	0.370	0.031	0.0140	0.0140	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.07	0.00	0.37	0.03	0.01	0.01
	EOF-H207p	Thermal Oxidizer H-207, Planned	0.098	0.005	0.370	0.031	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	2.94	0.16	11.10	0.92	0.42	0.42
	EOF-H207u	Thermal Oxidizer H-207, Unplanned	0.098	0.005	0.370	1.470	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	2.94	0.16	11.10	44.10	0.42	0.42
Oil Storage Tanks	EOF-T202	Oil Tank T-202	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/R	PTO 7904.R10	-	0.17	-	-	-	-
	EOF-T203	Oil Tank T-203	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/R	PTO 7904.R10	-	0.17	-	-	-	-
	EOF-T204	Oil Tank T-204	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/R	PTO 7904.R10	-	0.02	-	-	-	-
	EOF-T101	EB Tank T-101	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/R	PTO 7904.R10	-	0.05	-	-	-	-
Pigging Equipment	EOF-PROE	Receiver: oil emulsion	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.09	-	-	-	-
	EOF-PRU	Receiver: utility	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.09	-	-	-	-
	EOF-PRPG	Receiver: produced gas	-	0.0192	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.02	-	-	-	-
	EOF-PLSG	Launcher: seep gas	-	0.0192	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.02	-	-	-	-
	EOF-PRAAPL	Reciever: EOF to AAPL (at SYU)	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.70	-	-	-	-
	EOF-PLAAPL	Launcher: EOF to AAPL	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.40	-	-	-	-
Sump/Wastewater Tanks	EOF-S202	Sump Tank S-202	-	0.001	-	-	-	-	0.00	0.00	0.00	lb/ft2-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-TK201	Wash Tank TK-201	-	0.001	-	-	-	-	0.00	0.00	0.00	lb/ft2-day, lb CH4/ROC	PTO 7904.R10	-	0.03	-	-	-	-
	EOF-S203	Oil Sump S-203	-	0.018	-	-	-	-	0.00	0.00	0.00	lb/ft2-day, lb CH4/ROC	PTO 7904.R10	-	0.03	-	-	-	-
Loading Racks	EOF-RACKLPG	Rack - LPG	-	0.0433	-	-	-	-	0.00	0.00	0.00	lb/load, lb CH4/ROC	SBCAPCD Spreads	-	0.04	-	-	-	-
	EOF-RACKNLG	Rack - NGL	-	0.0282	-	-	-	-	0.00	0.00	0.00	lb/load, lb CH4/ROC	SBCAPCD Spreads	-	0.03	-	-	-	-
	EOF-RACKEB	Rack - Emulsion Breaker	-	1.079	-	-	-	-	0.00	0.00	0.00	lb/1000 gallons, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
Fugitive Cmpnnts, Gas/LL	EOF-FUGG-VALVES	Valves: Accessible	-	0.08	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	11.73	-	-	-	-
	EOF-FUGG-VALVESi	Valves: Inaccessible	-	0.08	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.01	-	-	-	-
	EOF-FUGG-VALVESU	Valves: Unsafe	-	0.402	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.10	-	-	-	-
	EOF-FUGG-CONN	Connectors: Accessible	-	0.005	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	4.04	-	-	-	-
	EOF-FUGG-CONNi	Connectors: Inaccessible	-	0.005	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.48	-	-	-	-
	EOF-FUGG-CONNu	Connectors: Unsafe	-	0.025	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.08	-	-	-	-
	EOF-FUGG-CS	Compressor Seal	-	0.432	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.36	-	-	-	-
	EOF-FUGG-PRV	Press. Relief Valves: Accessible	-	0.139	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.04	-	-	-	-
	EOF-FUGG-PRVi	Press. Relief Valves: Inaccessible	-	0.139	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGG-PRVu	Press. Relief Valves: Unsafe	-	0.696	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGG-PS	Pump Seal	-	0.521	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.22	-	-	-	-
Fugitive Cmpnnts, Oil	EOF-FUGO-VALVES	Valves: Accessible	-	0.028	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.75	-	-	-	-
	EOF-FUGO-VALVES	Valves: Accessible Cat E	-	0.017	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.05	-	-	-	-
	EOF-FUGO-CONN	Connectors: Accessible	-	0.005	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.65	-	-	-	-
	EOF-FUGO-CONN	Connectors: Accessible Cat E	-	0.003	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.04	-	-	-	-
	EOF-FUGO-CONNu	Connectors: Unsafe	-	0.023	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGO-PRV	Press. Relief Valves: Accessible	-	0.115	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGO-PS	Pump Seal	-	0.086	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.03	-	-	-	-
Solvent/Coatings	EOF-SOL	Cleanin/Degreasing	-	789.68	-	-	-	-	0.00	0.00	0.00	g/l	2014 CVR	-	24.41	-	-	-	-
	EOF-SCOAT	Surface Coating	-	250.00	-	-	-	-	0.00	0.00	0.00	g/l	2014 CVR	-	23.37	-	-	-	-
Other Equipment	EOF-EFP	Emergency Fire Pump	4.09	0.33	0.87	0.53	0.290	0.287	163.05	1E-05	0.0066	lb/MMBtu	CVR 2014- K	4.55	0.37	0.97	0.59	0.32	0.32
	EOF-EG	Emergency Generator	4.09	0.33	0.87	0.53	0.290	0.287	163.05	1E-05	0.0066	lb/MMBtu	CVR 2014- K	11.21	0.90	2.39	1.45	0.80	0.79
TOTAL EOF Emissions																			

South Ellwood Air Emissions: 2014 Operations
Platform Holly Facilities

			Emission Factors											Hourly Emissions, lbs/hr					
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**Sox**	**PM10**	**PM2.5**	**CO2**	**N2O**	**CH4**	**Units**		**NOx**	**ROC**	**CO**	**SOx**	**PM10**	**PM2.5**
Combustion: Flare	HOLLY-FLAREpi	Flare Planned - Pilot	0.068	0.086	0.37	0.002	0.02	0.02	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.01	0.02	0.08	0.00	0.00	0.00
	HOLLY-FLAREp	Flare Planned - Purge	0.068	0.086	0.37	0.037	0.02	0.02	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.16	0.20	0.85	0.09	0.05	0.05
	HOLLY-FLAREpu	Flare Planned - LP Purge	0.068	0.086	0.37	0.037	0.02	0.02	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.02	0.03	0.12	0.01	0.01	0.01
	HOLLY-FLAREi	Flare Planned - Intermittent	0.068	0.086	0.37	0.037	0.02	0.02	162.70	0.0002	0.02476	lb/MMBtu	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-FLAREu	Flare Unplanned	0.068	0.086	0.37	2.612	0.02	0.02	162.70	0.0002	0.02476	lb/MMBtu	2014 CVR	0.59	0.74	3.20	22.57	0.17	0.17
Fugitive Cmpnnts	HOLLY-FUGO	Oil, controlled	-	0.0009	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	2014 CVR	-	0.15	-	-	-	-
	HOLLY-FUGOu	Oil, unsafe	-	0.0044	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	2014 CVR	-	0.00	-	-	-	-
	HOLLY-FUGG	Gas, controlled	-	0.0147	-	-	-	-	1.06	0.00	1.35	lbs/clp-day, lb CH4/ROC	2014 CVR	-	8.62	-	-	-	-
	HOLLY-FUGGu	Gas, unsafe	-	0.0736	-	-	-	-	1.06	0.00	1.35	lbs/clp-day, lb CH4/ROC	2014 CVR	-	2.96	-	-	-	-
Pigging Equip.	HOLLY-PIGO	Oil Launcher	-	0.016	-	-	-	-	0.00	0.00	0.00	lb ROC/acf-ev.	2014 CVR	-	0.02	-	-	-	-
	HOLLY-PIGU	Utility Gas Launcher	-	0	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev.	2014 CVR	-	0.00	-	-	-	-
	HOLLY-PIGG	Gas Launcher	-	0	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev.	2014 CVR	-	0.00	-	-	-	-
Sumps/Tanks/Separators	HOLLY-T1	Oil surge tank (T-1)	-	0.0058	-	-	-	-	0.00	0.00	0.00	lb/ft2-day	2014 CVR	-	0.01	-	-	-	-
	HOLLY-T4	Overflow sump tank (T-4)	-	0.0058	-	-	-	-	0.00	0.00	0.00	lb/ft2-day	2014 CVR	-	0.03	-	-	-	-
Solvent/Coatings	HOLLY-SOL	Cleanin/Degreasing	-	-	-	-	-	-	0.00	0.00	0.00	actual numbers from CVR	2014 CVR	-	0.37	-	-	-	-
	HOLLY-SCOAT	Surface Coating	-	250.00	-	-	-	-	0.00	0.00	0.00	g/l	2014 CVR	-	191.10	-	-	-	-
Boom Boat	HOLLY-BB	Boom Boat	7.2	4.9	1357.34	0.27	48.10	48.100	517.70	0.00	0.02	g/bhp-hr	2014 CVR, permit	2.32	1.58	437.68	0.09	15.51	15.51
ICEs	HOLLY-EG	Backup Emergency Generator	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	3.19	0.26	0.69	0.30	0.22	0.22
	HOLLY-CRANE	Pedestal Crane	0.11	0.01	0.1	0.0002	0.0004	0.0004	22	0.000	0.001	lb/gal	2014 CVR	1.55	0.14	1.41	0.00	0.01	0.01
	HOLLY-DGEN1	Generator 1, NSCR, well maintenance	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.03	0.01	0.06	0.00	0.01	0.01
	HOLLY-DGEN2	Generator 2, NSCR, well maintenance	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.03	0.01	0.06	0.00	0.01	0.01
	HOLLY-DGEN3	Generator 3, NSCR, well maintenance	0.143	0.143	0.215	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.03	0.03	0.04	0.00	0.01	0.01
Supply Boat	HOLLY-SBmain	Supply Boat Main Engines	561	16.800	78.3	56.34	31.68	31.395	22296	0.002	0.904	lb/1000 gallons	2014 CVR/8234R9	151.53	4.54	21.15	15.22	8.56	8.48
	HOLLY-SBgen	Supply Boat Generator Engines	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-SBBT	Supply Boat Bow Thruster	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
Crew Boat	HOLLY-CBM	Crew Boat Main Engines	561	44.500	99.7	56.34	31.68	31.395	22296	0.002	0.904	lb/1000 gallons	2014 CVR/8234R9	45.83	3.64	8.15	4.60	2.59	2.56
	HOLLY-CBA	Crew Boat Auxillary Engines	600	48.980	129.26	56.34	40.49	40.126	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
Helicopters	HOLLY-HELIO	Heliocopter	1.58	0.68	3.82	0.15	5.98	4.19	396.71	0.00	0.02	lb/flight	2014 CVR, EPA	1.58	0.68	3.82	0.15	5.98	4.19
Total Platform Holly																			

Platform Holly Drilling Equipment

			Emission Factors											Peak Hourly Emissions, lbs/hr					
Equipment Category		**Description**	**NOx**	**ROC**	**CO**	**Sox**	**PM10**	**PM2.5**	**CO2**	**N2O**	**CH4**	**Units**		**NOx**	**ROC**	**CO**	**SOx**	**PM10**	**PM2.5**
ICEs	HOLLY-DCRANE	Crane	4.41	0.3	0.95	0.05	0.3	0.297	163.05	1E-05	0.0066	lb/MMBtu	2014 CVR	0.82	0.06	0.18	0.01	0.06	0.06
	HOLLY-DELU	Electric Line Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DSLU	Slick Line Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DHU	Hydraulic Unit for Casing Tongs	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DCTU	Coil Tubing Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DCU	Cement Unit	4.41	0.3	0.95	0.05	0.3	0.297	163.05	1E-05	0.0066	lb/MMBtu	2014 CVR	4.31	0.29	0.93	0.05	0.29	0.29
	HOLLY-DC	Compressor	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DNU	Nitrogen Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DWKP	Well Kill Pump ICE	4.41	0.3	0.95	0.05	0.3	0.297	163.05	1E-05	0.0066	lb/MMBtu	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DDGEN1	Generator 1, NSCR, well drilling	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.35	0.08	0.62	0.03	0.10	0.10
	HOLLY-DDGEN2	Generator 2, NSCR, well drilling	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.35	0.08	0.62	0.03	0.10	0.10
	HOLLY-DDGEN3	Generator 3, NSCR, well drilling	0.143	0.143	0.215	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.32	0.32	0.49	0.03	0.10	0.10
TOTAL Drilling														**6.16**	**0.83**	**2.83**	**0.14**	**0.65**	**0.65**

South Ellwood Air Emissions: 2014 Operations
EOF Facilities

			Daily Emissions, lbs/day						Annual Emissions, tons/yr						MT/Year			
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**	**CO2**	**N2O**	**CH4**	**CO2e**
Combustion-External	EOF-H201	Heater Treater H-201	0.29	0.02	0.25	0.04	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.000	0.000	0
	EOF-H202	Heater Treater H-202	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0
	EOF-H203	Heater Treater H-203	1.96	0.10	1.64	0.24	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00	1.26	0.000	0.000	1
	EOF-H204	Process Heater H-204	3.93	0.55	32.42	4.04	0.76	0.76	0.72	0.10	5.92	0.74	0.14	0.14	3338	0.004	0.671	3,356
Combustion: Flares	EOF-H205pi	Thermal Oxidizer H-205, Pilot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	EOF-H205p	Thermal Oxidizer H-205, Planned	18.76	1.27	46.89	14.39	6.56	6.56	3.21	0.22	8.02	2.46	1.12	1.12	11844	0.016	2.195	11,903
	EOF-H205u	Thermal Oxidizer H-205, Unplanned	2.12	0.14	5.30	77.91	0.74	0.74	0.00	0.00	0.00	0.04	0.00	0.00	4	0.000	0.001	4
	EOF-H206pi	Thermal Oxidizer H-206, Pilot	0.57	0.02	3.02	0.25	0.11	0.11	0.10	0.00	0.55	0.05	0.02	0.02	188	0.000	0.031	189
	EOF-H206p	Thermal Oxidizer H-206, Planned	0.94	0.05	3.53	0.29	0.13	0.13	0.16	0.01	0.60	0.05	0.02	0.02	278	0.000	0.056	280
	EOF-H206u	Thermal Oxidizer H-206, Unplanned	4.70	0.26	17.76	70.56	0.67	0.67	0.00	0.00	0.01	0.04	0.00	0.00	4	0.000	0.001	4
	EOF-H207pi	Thermal Oxidizer H-207, Pilot	1.68	0.07	8.88	0.74	0.34	0.34	0.31	0.01	1.62	0.13	0.06	0.06	552	0.001	0.090	554
	EOF-H207p	Thermal Oxidizer H-207, Planned	2.51	0.14	9.49	0.79	0.36	0.36	0.43	0.02	1.62	0.13	0.06	0.06	747	0.001	0.152	752
	EOF-H207u	Thermal Oxidizer H-207, Unplanned	8.13	0.45	30.71	122.01	1.16	1.16	0.00	0.00	0.02	0.06	0.00	0.00	7	0.000	0.001	7
Oil Storage Tanks	EOF-T202	Oil Tank T-202	-	4.09	-	-	-	-	-	0.75	-	-	-	-	0	0.000	0.000	0
	EOF-T203	Oil Tank T-203	-	4.09	-	-	-	-	-	0.75	-	-	-	-	0	0.000	0.000	0
	EOF-T204	Oil Tank T-204	-	0.59	-	-	-	-	-	0.11	-	-	-	-	0	0.000	0.000	0
	EOF-T101	EB Tank T-101	-	1.15	-	-	-	-	-	0.21	-	-	-	-	0	0.000	0.000	0
Pigging Equipment	EOF-PROE	Receiver: oil emulsion	-	0.09	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.004	0
	EOF-PRU	Receiver: utility	-	0.09	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-PRPG	Receiver: produced gas	-	0.02	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.001	0
	EOF-PLSG	Launcher: seep gas	-	0.02	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-PRAAPL	Reciever: EOF to AAPL (at SYU)	-	0.70	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.005	0
	EOF-PLAAPL	Launcher: EOF to AAPL	-	0.40	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.003	0
Sump/Wastewater Tanks	EOF-S202	Sump Tank S-202	-	0.03	-	-	-	-	-	0.01	-	-	-	-	0	0.000	0.000	0
	EOF-TK201	Wash Tank TK-201	-	0.71	-	-	-	-	-	0.13	-	-	-	-	0	0.000	0.000	0
	EOF-S203	Oil Sump S-203	-	0.69	-	-	-	-	-	0.13	-	-	-	-	0	0.000	0.000	0
Loading Racks	EOF-RACKLPG	Rack - LPG	-	0.09	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-RACKNLG	Rack - NGL	-	0.03	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-RACKEB	Rack - Emulsion Breaker	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
Fugitive Cmpnnts, Gas/LL	EOF-FUGG-VALVES	Valves: Accessible	-	281.52	-	-	-	-	-	51.38	-	-	-	-	32	0.000	47.164	1,211
	EOF-FUGG-VALVESi	Valves: Inaccessible	-	0.32	-	-	-	-	-	0.06	-	-	-	-	0	0.000	0.054	1
	EOF-FUGG-VALVESU	Valves: Unsafe	-	2.41	-	-	-	-	-	0.44	-	-	-	-	0	0.000	0.404	10
	EOF-FUGG-CONN	Connectors: Accessible	-	97.03	-	-	-	-	-	17.71	-	-	-	-	11	0.000	16.256	417
	EOF-FUGG-CONNi	Connectors: Inaccessible	-	11.64	-	-	-	-	-	2.12	-	-	-	-	1	0.000	1.949	50
	EOF-FUGG-CONNu	Connectors: Unsafe	-	1.95	-	-	-	-	-	0.36	-	-	-	-	0	0.000	0.327	8
	EOF-FUGG-CS	Compressor Seal	-	8.64	-	-	-	-	-	1.58	-	-	-	-	1	0.000	1.448	37
	EOF-FUGG-PRV	Press. Relief Valves: Accessible	-	0.97	-	-	-	-	-	0.18	-	-	-	-	0	0.000	0.163	4
	EOF-FUGG-PRVi	Press. Relief Valves: Inaccessible	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGG-PRVu	Press. Relief Valves: Unsafe	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGG-PS	Pump Seal	-	5.21	-	-	-	-	-	0.95	-	-	-	-	1	0.000	0.873	22
Fugitive Cmpnnts, Oil	EOF-FUGO-VALVES	Valves: Accessible	-	18.12	-	-	-	-	-	3.31	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-VALVES	Valves: Accessible Cat E	-	1.24	-	-	-	-	-	0.23	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-CONN	Connectors: Accessible	-	15.60	-	-	-	-	-	2.85	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-CONN	Connectors: Accessible Cat E	-	0.94	-	-	-	-	-	0.17	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-CONNu	Connectors: Unsafe	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-PRV	Press. Relief Valves: Accessible	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-PS	Pump Seal	-	0.60	-	-	-	-	-	0.11	-	-	-	-	0	0.000	0.000	0
Solvent/Coatings	EOF-SOL	Cleanin/Degreasing	-	24.41	-	-	-	-	-	0.07	-	-	-		0.00	0.000	0.000	0
	EOF-SCOAT	Surface Coating	-	23.37	-	-	-	-	-	0.03	-	-	-		0.00	0.000	0.000	0
Other Equipment	EOF-EFP	Emergency Fire Pump	2.27	0.18	0.48	0.29	0.16	0.16	0.06	0.00	0.01	0.01	0.00	0.00	2	0.000	0.000	2
	EOF-EG	Emergency Generator	11.21	0.90	2.39	1.45	0.80	0.79	0.07	0.01	0.01	0.01	0.00	0.00	2	0.000	0.000	2
TOTAL EOF Emissions			**44.13**	**510.06**	**108.99**	**22.53**	**9.39**	**9.38**	**5.06**	**83.99**	**18.39**	**3.72**	**1.44**	**1.44**	**17,015**	**0.02**	**71.85**	**18,818**

South Ellwood Air Emissions: 2014 Operations
Platform Holly Facilities

			Daily Emissions, lbs/day						Annual Emissions, tons/yr						MT/Yr			
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**CO2**	**N2O**	**CH4**	**CO2e**
Combustion: Flare	HOLLY-FLAREpi	Flare Planned - Pilot	0.18	0.23	0.98	0.01	0.05	0.05	0.03	0.04	0.18	0.00	0.01	0.01	61	0.000	0.010	61
	HOLLY-FLAREp	Flare Planned - Purge	0.60	0.76	3.28	0.33	0.18	0.18	0.11	0.14	0.60	0.06	0.03	0.03	204	0.000	0.033	205
	HOLLY-FLAREpu	Flare Planned - LP Purge	0.04	0.05	0.21	0.02	0.01	0.01	0.01	0.01	0.04	0.00	0.00	0.00	13	0.000	0.002	13
	HOLLY-FLAREi	Flare Planned - Intermittent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-FLAREu	Flare Unplanned	0.59	0.74	3.20	22.57	0.17	0.17	0.00	0.00	0.00	0.01	0.00	0.00	1	0.000	0.000	1
Fugitive Cmpnnts	HOLLY-FUGO	Oil, controlled	-	3.59	-	-	-	-	-	0.66	-	-	-	-	0	0.000	0.000	0
	HOLLY-FUGOu	Oil, unsafe	-	0.06	-	-	-	-	-	0.01	-	-	-	-	0	0.000	0.000	0
	HOLLY-FUGG	Gas, controlled	-	206.78	-	-	-	-	-	37.74	-	-	-	-	36	0.000	45.852	1,182
	HOLLY-FUGGu	Gas, unsafe	-	70.95	-	-	-	-	-	12.95	-	-	-	-	12	0.000	15.732	406
Pigging Equip.	HOLLY-PIGO	Oil Launcher	-	0.02	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	HOLLY-PIGU	Utility Gas Launcher	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	HOLLY-PIGG	Gas Launcher	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
													-	-				
Sumps/Tanks/Separators	HOLLY-T1	Oil surge tank (T-1)	-	0.26	-	-	-	-	-	0.05	-	-	-	-	0	0.000	0.000	0
	HOLLY-T4	Overflow sump tank (T-4)	-	0.66	-	-	-	-	-	0.12	-	-	-	-	0	0.000	0.000	0
Solvent/Coatings	HOLLY-SOL	Cleanin/Degreasing	-	3.04	-	-	-	-	-	0.34	-	-	-	-	0	0.000	0.000	0
	HOLLY-SCOAT	Surface Coating	-	191.10	-	-	-	-	-	0.24	-	-	-	-	0	0.000	0.000	0
Boom Boat	HOLLY-BB	Boom Boat	3.48	2.37	656.52	0.13	23.26	23.26	0.00	0.00	0.33	0.00	0.01	0.01	0	0.000	0.000	0
ICEs	HOLLY-EG	Backup Emergency Generator	3.19	0.26	0.69	0.30	0.22	0.22	0.03	0.00	0.01	0.00	0.00	0.00	1	0.000	0.000	1
	HOLLY-CRANE	Pedestal Crane	9.10	0.83	8.27	0.02	0.03	0.03	0.46	0.04	0.42	0.00	0.00	0.00	93	0.000	0.004	93
	HOLLY-DGEN1	Generator 1, NSCR, well maintenance	0.76	0.17	1.33	0.06	0.21	0.21	0.14	0.03	0.24	0.01	0.04	0.04	116	0.000	0.019	117
	HOLLY-DGEN2	Generator 2, NSCR, well maintenance	0.76	0.17	1.33	0.06	0.21	0.21	0.14	0.03	0.24	0.01	0.04	0.04	116	0.000	0.019	117
	HOLLY-DGEN3	Generator 3, NSCR, well maintenance	0.69	0.69	1.04	0.06	0.22	0.22	0.13	0.13	0.19	0.01	0.04	0.04	124	0.000	0.020	125
Supply Boat	HOLLY-SBmain	Supply Boat Main Engines	539.12	16.14	75.25	54.14	30.44	30.17	14.95	0.45	2.09	1.50	0.84	0.84	535	0.000	0.022	535
	HOLLY-SBgen	Supply Boat Generator Engines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-SBBT	Supply Boat Bow Thruster	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
Crew Boat	HOLLY-CBM	Crew Boat Main Engines	90.0	7.1	16.0	9.0	5.1	5.0	14.29	1.13	2.54	1.43	0.81	0.80	568	0.000	0.023	568
	HOLLY-CBA	Crew Boat Auxillary Engines	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
Helicopters	HOLLY-HELIO	Heliocopter	1.58	0.68	3.82	0.15	5.98	4.19	0.00	0.00	0.00	0.00	0.01	0.00	0	0.000	0.000	0
Total Platform Holly			**650.08**	**506.70**	**771.90**	**86.88**	**66.09**	**63.97**	**30.28**	**54.10**	**6.87**	**3.05**	**1.83**	**1.82**	**1,880**	**0.001**	**61.7**	**3,423**

Platform Holly Drilling Equipment

			Peak Daily Emissions, lbs/day						Annual Emissions, tons/yr						MT/Yr			
Equipment Category		**Description**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**CO2**	**N2O**	**CH4**	**CO2e**
ICEs	HOLLY-DCRANE	Crane	6.54	0.45	1.41	0.07	0.45	0.44	0.28	0.02	0.06	0.00	0.02	0.02	9	0.000	0.000	9
	HOLLY-DELU	Electric Line Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DSLU	Slick Line Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DHU	Hydraulic Unit for Casing Tongs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DCTU	Coil Tubing Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DCU	Cement Unit	34.51	2.35	7.43	0.39	2.35	2.33	0.21	0.01	0.04	0.00	0.01	0.01	7	0.000	0.000	7
	HOLLY-DC	Compressor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DNU	Nitrogen Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DWKP	Well Kill Pump ICE	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.01	0.00	0.00	0.00	1	0.000	0.000	1
	HOLLY-DDGEN1	Generator 1, NSCR, well drilling	8.47	1.89	14.89	0.66	2.35	2.35	0.48	0.11	0.84	0.04	0.13	0.13	401	0.0006	0.0651	403
	HOLLY-DDGEN2	Generator 2, NSCR, well drilling	8.47	1.89	14.89	0.66	2.35	2.35	0.48	0.11	0.84	0.04	0.13	0.13	401	0.0006	0.0651	403
	HOLLY-DDGEN3	Generator 3, NSCR, well drilling	7.78	7.78	11.70	0.71	2.50	2.50	0.44	0.44	0.66	0.04	0.14	0.14	428	0.0007	0.0695	430
TOTAL Drilling			**65.78**	**14.35**	**50.3**	**2.50**	**9.99**	**9.96**	**1.91**	**0.69**	**2.45**	**0.12**	**0.44**	**0.44**	**1,248**	**0.002**	**0.200**	**1,253**

South Ellwood Air Emissions: Baseline Operations

EOF Facilities

									Operating Schedule						
Equipment Category	**Code**	**Description**	**Fuel or Service**	**Parameter**	**Size**	**Units**	**Capacity**	**Units**	**Actual Annual Use**	**Units**	**Peak Day Use**	**Units**	**Peak Day Hours**	**Yearly Days**	**Load**
				S, ppmv											
Combustion-External	EOF-H201	Heater Treater H-201	Fuel Gas	80	4.399	MMBtu/hr	4.399	MMBtu/hr	3	mmbtu	3.0	mmbtu/day	0.68	0.03	0.00
	EOF-H202	Heater Treater H-202	Fuel Gas	80	2.464	MMBtu/hr	2.464	MMBtu/hr	0	mmbtu	0.0	mmbtu/day	0.00	0.00	0.00
	EOF-H203	Heater Treater H-203	Fuel Gas	80	4.399	MMBtu/hr	4.399	MMBtu/hr	20	mmbtu	20.0	mmbtu/day	4.55	0.19	0.00
	EOF-H204	Process Heater H-204	FG/Permeate	239	25.000	MMBtu/hr	25.000	MMBtu/hr	34,427	mmbtu	94.3	mmbtu/day	24.00	365	0.16
Combustion: Flares	EOF-H205pi	Thermal Oxidizer H-205, Pilot	Fuel Gas	205	-	MMBtu/hr	-	MMBtu/hr	0	mmbtu	0	mmbtu/day	0.00	0.00	1.00
	EOF-H205p	Thermal Oxidizer H-205, Planned	FG/Permeate	205	35.00	MMBtu/hr	35.000	MMBtu/hr	160,361	mmbtu	468.9	mmbtu/day	24.00	342	0.52
	EOF-H205u	Thermal Oxidizer H-205, Unplanned	FG/Permeate	15,000	140.00	MMBtu/hr	140.000	MMBtu/hr	53	mmbtu	53.0	mmbtu/day	0.38	0.02	0.00
	EOF-H206pi	Thermal Oxidizer H-206, Pilot	Fuel Gas	205	0.34	MMBtu/hr	0.34	MMBtu/hr	2,988	mmbtu	8.2	mmbtu/day	24.00	365	1.00
	EOF-H206p	Thermal Oxidizer H-206, Planned	Permeate	205	30.00	MMBtu/hr	30.00	MMBtu/hr	3,266	mmbtu	9.5	mmbtu/day	24.00	342	0.01
	EOF-H206u	Thermal Oxidizer H-206, Unplanned	Permeate	15,000	220.00	MMBtu/hr	220.00	MMBtu/hr	48	mmbtu	48.0	mmbtu/day	0.22	0.01	0.00
	EOF-H207pi	Thermal Oxidizer H-207, Pilot	Fuel Gas	205	1.00	MMBtu/hr	1.00	MMBtu/hr	8,771	mmbtu	24.0	mmbtu/day	24.00	365	1.00
	EOF-H207p	Thermal Oxidizer H-207, Planned (uprated)	Permeate	205	50.00	MMBtu/hr	30.00	MMBtu/hr	8,771	mmbtu	25.6	mmbtu/day	24.00	342	0.03
	EOF-H207u	Thermal Oxidizer H-207, Unplanned	Permeate	15,000	30.00	MMBtu/hr	30.00	MMBtu/hr	83	mmbtu	83.0	mmbtu/day	2.77	0.12	0.00
				RVP											
Oil Storage Tanks	EOF-T202	Oil Tank T-202	Oil	4.8	35'd x 16'h	feet	3,400	bbl/day	5.21E+07	gal/yr	-	-	24.0		1.00
	EOF-T203	Oil Tank T-203	Oil	4.8	35'd x 16'h	feet	3,400	bbl/day	5.21E+07	gal/yr	-	-	24.0		1.00
	EOF-T204	Oil Tank T-204	Oil	4.8	30'd x 24'h	feet	-	bbl/day	0.00E+00	gal/yr	-	-	24.0		1.00
	EOF-T101	EB Tank T-101	HC	1.5	12'd x 20'h	feet	-	bbl/day	0.00E+00	gal/yr	-	-	24.0		1.00
				psig											
Pigging Equipment	EOF-PROE	Receiver: oil emulsion	oil	1	0.33'd x 4.5'l	feet	1.13	acf-event	79	events/yr	1.00	events/dy	1.0	79.0	-
	EOF-PRU	Receiver: utility	gas or oil	1	0.33'd x 4.5'l	feet	1.13	acf-event	2	events/yr	1.00	events/dy	1.0	2.0	-
	EOF-PRPG	Receiver: produced gas	gas	1	0.33'd x 4.5'l	feet	1.13	acf-event	49	events/yr	1.00	events/dy	1.0	49.0	-
	EOF-PLSG	Launcher: seep gas	gas	1	0.33'd x 4.5'l	feet	1.13	acf-event	0	events/yr	1.00	events/dy	1.0	0.0	-
	EOF-PLSG	Reciever: EOF to AAPL (at SYU)	oil	1	0.83'd x 12'l	feet	9.24	acf-event	12	events/yr	1.00	events/dy	1.0	12.0	-
	EOF-PLSG	Launcher: EOF to AAPL	oil	1	0.67'd x 12'l	feet	5.21	acf-event	12	events/yr	1.00	events/dy	1.0	12.0	-
Sump/Wastewater Tanks	EOF-S202	Sump Tank S-202	W/W	sec/VRS	6.5'dia	feet	33.18	sq. ft.	33.2	sq. ft.	-	-	24.0	365	-
	EOF-TK201	Wash Tank TK-201	W/W	sec/VRS	30.0' dia	feet	706.86	sq. ft.	706.9	sq. ft.	-	-	24.0	365	-
	EOF-S203	Oil Sump S-203	oil		7' dia	feet	38.48	sq. ft.	38.5	sq. ft.	-	-	24.0	365	-
Loading Racks	EOF-RACK	Rack - LPG	LPG/NGL	balanced	166	loading/yr	10	kgal/hr	1,476	kgal/yr	8894	gal/day	0.89	166	-
	EOF-RACK	Rack - NGL	LPG/NGL	balanced	62	loading/yr	10	kgal/hr	523	kgal/yr	8442	gal/day	0.84	62	-
	EOF-RACK	Rack - Emulsion Breaker	HC Liq.	submerged	0	loading/yr	6.72	kgal/hr	0	kgal/yr	0	gal/day	0	0	-
Fugitive Cmpnnts, Gas/LL	EOF-FUGG-VALVES	Valves: Accessible	Gas/Lt. Liq.	-	3519	comp-lp	3519	comp-lp			-	-	24.0	365	-
	EOF-FUGG-VALVESi	Valves: Inaccessible	Gas/Lt. Liq.	-	4	comp-lp	4	comp-lp			-	-	24.0	365	-
	EOF-FUGG-VALVESU	Valves: Unsafe	Gas/Lt. Liq.	-	6	comp-lp	6	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CONN	Connectors: Accessible	Gas/Lt. Liq.	-	19,406	comp-lp	19406	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CONNi	Connectors: Inaccessible	Gas/Lt. Liq.	-	2,327	comp-lp	2327	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CONNu	Connectors: Unsafe	Gas/Lt. Liq.	-	78	comp-lp	78	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CS	Compressor Seal	Gas/Lt. Liq.	-	20	comp-lp	20	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PRV	Press. Relief Valves: Accessible	Gas/Lt. Liq.	-	7	comp-lp	7	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PRVi	Press. Relief Valves: Inaccessible	Gas/Lt. Liq.	-	-	comp-lp	0	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PRVu	Press. Relief Valves: Unsafe	Gas/Lt. Liq.	-	-	comp-lp	0	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PS	Pump Seal	Gas/Lt. Liq.	-	10	comp-lp	10	comp-lp			-	-	24.0	365	-
				sub-total =	**25,377**		**25,377**								
Fugitive Cmpnnts, Oil	EOF-FUGO-VALVES	Valves: Accessible	Oil	-	647	comp-lp	647	comp-lp			-	-	24.0	365	-
	EOF-FUGO-VALVES	Valves: Accessible Cat E	Oil	-	73	comp-lp	73	comp-lp			-	-	24.0	365	-
	EOF-FUGO-CONN	Connectors: Accessible	Oil	-	3,120	comp-lp	3,120	comp-lp			-	-	24.0	365	-
	EOF-FUGO-CONN	Connectors: Accessible Cat E	Oil	-	314	comp-lp	314	comp-lp			-	-	24.0	365	-
	EOF-FUGO-CONNu	Connectors: Unsafe	Oil	-	-	comp-lp	-	comp-lp			-	-	24.0	365	-
	EOF-FUGO-PRV	Press. Relief Valves: Accessible	Oil	-	-	comp-lp	-	comp-lp			-	-	24.0	365	-
	EOF-FUGO-PS	Pump Seal	Oil	-	7	comp-lp	7	comp-lp			-	-	24.0	365	-
				sub-total =	**4,161**		**4,161**								
Solvent/Coatings	EOF-SOL	Cleanin/Degreasing	-	-	20.00	gal/yr	3.70	gal/day avg	790	g/l	3.70	gal/day	1	365	-
	EOF-SCOAT	Surface Coating	-	-	28.0	gal/yr	11.20	gal/day avg	250	g/l	11.20	gal/day	1	365	-
Other Equipment	EOF-EFP	Emergency Fire Pump	CARB Diesel		292	bhp	26	Hours/yr	28.9	mmbtu/yr	0.56	mmbtu/day	0.5	26.00	0.54
	EOF-EG	Emergency Generator	CARB Diesel		509	bhp	12	Hours/yr	32.9	mmbtu/yr	2.74	mmbtu/day	1.0	12.00	0.77
TOTAL EOF Emissions															

South Ellwood Air Emissions: Baseline Operations
Platform Holly Facilities

									Operating Schedule						
Equipment Category	Code	Description	Fuel or Service	Parameter	Size	Units	Capacity	Units	Actual Total Use	Units	Peak Day Use	Units	Peak Day Hours	Yearly Days	Load
Combustion: Flare	HOLLY-FLAREpi	Flare Planned - Pilot	Fuel Gas	-	200	scfh	0.220	MMBtu/hr	964	mmbtu	2.6	mmbtu/day	24.00	365.00	0.50
	HOLLY-FLAREp	Flare Planned - Purge	Fuel Gas	-	2100	scfh	2.310	MMBtu/hr	3,236	mmbtu	8.9	mmbtu/day	24.00	365.00	0.16
	HOLLY-FLAREpu	Flare Planned - LP Purge	Fuel Gas	-	300	scfh	0.330	MMBtu/hr	209	mmbtu	0.6	mmbtu/day	24.00	365.00	0.07
	HOLLY-FLAREi	Flare Planned - Intermittent	Holly Gas	-	0	scfh	0.000	MMBtu/hr	0	mmbtu	0.0	mmbtu/day	0.00	0.00	0.00
	HOLLY-FLAREu	Flare Unplanned	Holly Gas	-	480000	scf/yr	528.000	MMBtu/hr	8.6	mmbtu	8.6	mmbtu/day	0.02	0.00	0.00
Fugitive Cmpnnts	HOLLY-FUGO	Oil, controlled	Oil	-	3992	comp-lp	-	-			-	-	24.0	365	-
	HOLLY-FUGOu	Oil, unsafe	Oil	-	14	comp-lp	-	-			-	-	24.0	365	-
	HOLLY-FUGG	Gas, controlled	Gas	-	14067	comp-lp	-	-			-	-	24.0	365	-
	HOLLY-FUGGu	Gas, unsafe	Gas	-	964	comp-lp	-	-			-	-	24.0	365	-
Pigging Equip.	HOLLY-PIGO	Oil Launcher	Gas	-	5.00	psi	1.40	ft3	79	events/yr	1.00	events/dy	1.0	79.0	-
	HOLLY-PIGU	Utility Gas Launcher	Gas	-	5.00	psi	1.40	ft3	2	events/yr	1.00	events/dy	1.0	2.0	-
	HOLLY-PIGG	Gas Launcher	Gas	-	5.00	psi	1.40	ft3	49	events/yr	1.00	events/dy	1.0	49.0	-
Sumps/Tanks/Separators	HOLLY-T1	Oil surge tank (T-1)	-	-	44.2	ft2	-	-			-	-	24.0	365	-
	HOLLY-T4	Overflow sump tank (T-4)	-	-	113.2	ft2	-	-			-	-	24.0	365	-
Solvent/Coatings	HOLLY-SOL	Cleanin/Degreasing	-	-	177.6	gal/yr	32.89	gal/day avg	250	g/l	32.89	gal/day	1	365	-
	HOLLY-SCOAT	Surface Coating	-	-	229	gal/yr	91.60	gal/day avg	250	g/l	91.60	gal/day	1	365	-
Boom Boat	HOLLY-BB	Boom Boat	Gas	-	225	bhp-total	0.1	gal/hp-hr	1.5	hrs/yr	1.5	hrs/day	1.5	1	0.65
ICEs	HOLLY-EG	Backup Emergency Generator	D2	-	373.00	bhp	21.2	gallons/hr	0.09	kgal/yr	0.030	kgal/day	0.25	3	0.00
	HOLLY-CRANE	Pedestal Crane	D2	-	250.00	bhp	14.1	gallons/hr	8.311	kgal/yr	0.083	kgal/day	5.9	298	0.34
	HOLLY-DGEN1	Generator 1, NSCR, well maintenance	NG	-	803	hp	7.59	mmbtu/hr	1,662	mmbtu	4.6	mmbtu/day	24	365	0.025
	HOLLY-DGEN2	Generator 2, NSCR, well maintenance	NG	-	803	hp	7.59	mmbtu/hr	1,662	mmbtu	4.6	mmbtu/day	24	365	0.025
	HOLLY-DGEN3	Generator 3, NSCR, well maintenance	NG	-	1053	hp	8.10	mmbtu/hr	1,774	mmbtu	4.9	mmbtu/day	24	365	0.025
Supply Boat	HOLLY-SBmain	Supply Boat Main Engines	D2	-	4920.00	bhp-total	270.10	gal/hr	64.0	kGal/yr	961	gal/day	3.6	365	0.65
	HOLLY-SBgen	Supply Boat Generator Engines	D2	-	530.00	bhp-total	29.10	gal/hr	0	kGal/yr	0	gal/day	0.0	365	0.50
	HOLLY-SBBT	Supply Boat Bow Thruster	D2	-	530.00	bhp-total	29.10	gal/hr	0	kGal/yr	0	gal/day	0.0	365	0.50
Crew Boat	HOLLY-CBM	Crew Boat Main Engines	D2	-	1605.00	bhp-total	81.70	gal/hr	51.4	kGal/yr	160.4	gal/day	2.0	365	0.85
	HOLLY-CBA	Crew Boat Auxillary Engines	D2	-	131.00	bhp-total	7.20	gal/hr	0	kGal/yr	0	gal/day	0.0	365	0.50
Helicopters	HOLLY-HELIO	Heliocopter	AG	-			20.79	gal/RT Flight	2	flights/yr					
Total Platform Holly															

Platform Holly Drilling Equipment

								Operating Schedule							
Equipment Category		Description	Fuel or Service	Size	Units	Capacity	Units	Actual Total Use	Units	Actual Total Gallons	Peak Day Use	Units	Peak Day Hours	Hrs/ well or Yearly Days	Ann. Avg Load
ICEs	HOLLY-DCRANE	Crane	D2	92	hp	4.7	gallons/hr	151	mmbtu/yr	1,112	-	-	8	675	0.29
	HOLLY-DELU	Electric Line Unit	D2	121	hp	0.0	electric	0	mmbtu/yr	0	-	-	0	48	0.42
	HOLLY-DSLU	Slick Line Unit	D2	90	hp	0.0	electric	0	mmbtu/yr	0	-	-	4	48	0.42
	HOLLY-DHU	Hydraulic Unit for Casing Tongs	D2	90	hp	0.0	electric	0	mmbtu/yr	0	-	-	4	405	0.42
	HOLLY-DCTU	Coil Tubing Unit	D2	210	hp	0.0	electric	0	mmbtu/yr	0	-	-	0	540	0.42
	HOLLY-DCU	Cement Unit	D2	335	hp	17.1	gallons/hr	113	mmbtu/yr	834	-	-	8	96	0.42
	HOLLY-DC	Compressor	D2	110	hp	0.0	electric	0	mmbtu/yr	0	-	-	2	1350	0.42
	HOLLY-DNU	Nitrogen Unit	D2	345	hp	0.0	electric	0	mmbtu/yr	0	-	-	0	48	0.42
	HOLLY-DWKP	Well Kill Pump ICE	D2	110	hp	5.6	gallons/hr	19	mmbtu/yr	137	-	-	0	48	0.42
	HOLLY-DDGEN1	Generator 1, NSCR, well drilling	NG	803	hp	7.59	mmbtu/hr	6,886	mmbtu/yr	-	51.0	mmbtu/day	24	135	0.10
	HOLLY-DDGEN2	Generator 2, NSCR, well drilling	NG	803	hp	7.59	mmbtu/hr	6,886	mmbtu/yr	-	51.0	mmbtu/day	24	135	0.10
	HOLLY-DDGEN3	Generator 3, NSCR, well drilling	NG	1053	hp	8.10	mmbtu/hr	7,348	mmbtu/yr	-	54.4	mmbtu/day	24	135	0.10
TOTAL Drilling															

South Ellwood Air Emissions: Baseline Operations

NOTES

1) Daily average crude oil production, average, bopd	3,400	
2) Daily average gas production, average, mscfd	2,814	
3) LPG/NGL production annual, gallons	3,135,583	
4) LPG/NGL production mixed with crude into pipeline (based on 2014 fraction)	1,964,999	
5) Wells drilled, number	1.2	
6) Time per well drilled, days	112.5	
7) Estimated total annual fuel use, gas, mmbtu, EOF + Holly	228,307	mmbtu/yr
8) EOF Heaters and flare total (baseline annual total of 224,248 mmbtu)	218,791	mmbtu/yr
9) DPM PM2.5/PM10 ratio, from SCAQMD CEIDARS	0.991	Distillate non-electrical generation, PM2.5/PM10 fraction

10) Drilling generators assumed to operate at 28% load during drilling, as per Applicant submittals for drilling generator #1 five year average

11) Supply boat assumed to operate during drilling only

12) Loading rack ROC emission factor was corrected to be 4.8 lb ROC/kgal transferred with a 95% vapor recovery efficiency (0.24), see APCD HRA Report for inventory year 2008 DRAFT

13) Loading rack loading rate was also corrected to 10 kgal/hr as per APCD HRA report for 2008 inventory year DRAFT

14) EOF Heater use linearly increased by crude throughput increase

15) Supply boat maximum daily fuel use of 961 gallons as per Applicant submittals for 4 trips per day from Casitas Pier

16) Crew boat peak day fuel use increased by 15% during drilling only

17) Increase in crude tanks fugitive emissions, fraction	1.0
18) Platform Holly drilling generators peak day load average	0.28
19) Holly diesel fuel use, crane plus drilling	10,484
20) 5 year average sulfur truck trips used for baseline, annual trips	103
21) 5 year average LPG truck trips used for baseline, annual trips	166
22) 5 year average NGL truck trips used for baseline, annual trips	62

South Ellwood Air Emissions: Baseline Operations

EOF Facilities			Emission Factors											Hourly Emissions, lbs/hr					
Equipment Category	Code	Description	NOx	ROC	CO	Sox	PM10	PM2.5	CO2	N2O	CH4	Units	EF Source	NOx	ROC	CO	SOx	PM_{10}	$PM_{2.5}$
Combustion-External	EOF-H201	Heater Treater H-201	0.098	0.005	0.082	0.012	0.0070	0.0070	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.29	0.02	0.25	0.04	0.02	0.02
	EOF-H202	Heater Treater H-202	0.098	0.005	0.082	0.012	0.0070	0.0070	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.00	0.00	0.00	0.00	0.00	0.00
	EOF-H203	Heater Treater H-203	0.098	0.005	0.082	0.012	0.0070	0.0070	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.43	0.02	0.36	0.05	0.03	0.03
	EOF-H204	Process Heater H-204	0.036	0.005	0.297	0.037	0.0070	0.0070	186.17	0.0002	0.03742	lb/MMBtu	PTO 7904.R10	0.90	0.13	7.43	0.93	0.18	0.18
Combustion: Flares	EOF-H205pi	Thermal Oxidizer H-205, Pilot	0.040	0.003	0.100	0.031	0.0140	0.0140	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.00	0.00	0.00	0.00	0.00	0.00
	EOF-H205p	Thermal Oxidizer H-205, Planned	0.040	0.003	0.100	0.031	0.0140	0.0140	164.12	0.0002	0.03041	lb/MMBtu	PTO 7904.R10	1.40	0.09	3.50	1.07	0.49	0.49
	EOF-H205u	Thermal Oxidizer H-205, Unplanned	0.040	0.003	0.100	1.470	0.0140	0.0140	164.12	0.0002	0.03041	lb/MMBtu	PTO 7904.R10	2.12	0.14	5.30	77.91	0.74	0.74
	EOF-H206pi	Thermal Oxidizer H-206, Pilot	0.070	0.003	0.370	0.031	0.0140	0.0140	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.02	0.00	0.13	0.01	0.00	0.00
	EOF-H206p	Thermal Oxidizer H-206, Planned	0.098	0.005	0.370	0.031	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	2.94	0.16	11.10	0.92	0.42	0.42
	EOF-H206u	Thermal Oxidizer H-206, Unplanned	0.098	0.005	0.370	1.470	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	4.70	0.26	17.76	70.56	0.67	0.67
	EOF-H207pi	Thermal Oxidizer H-207, Pilot	0.070	0.003	0.370	0.031	0.0140	0.0140	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.07	0.00	0.37	0.03	0.01	0.01
	EOF-H207p	Thermal Oxidizer H-207, Planned (uprated)	0.098	0.005	0.370	0.031	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	2.94	0.16	11.10	0.92	0.42	0.42
	EOF-H207u	Thermal Oxidizer H-207, Unplanned	0.098	0.005	0.370	1.470	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	2.94	0.16	11.10	44.10	0.42	0.42
Oil Storage Tanks	EOF-T202	Oil Tank T-202	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/ROC	PTO 7904.R10	-	0.17	-	-	-	-
	EOF-T203	Oil Tank T-203	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/ROC	PTO 7904.R10	-	0.17	-	-	-	-
	EOF-T204	Oil Tank T-204	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/ROC	PTO 7904.R10	-	0.02	-	-	-	-
	EOF-T101	EB Tank T-101	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/ROC	PTO 7904.R10	-	0.05	-	-	-	-
Pigging Equipment	EOF-PROE	Receiver: oil emulsion	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.09	-	-	-	-
	EOF-PRU	Receiver: utility	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.09	-	-	-	-
	EOF-PRPG	Receiver: produced gas	-	0.0192	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.02	-	-	-	-
	EOF-PLSG	Launcher: seep gas	-	0.0192	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.02	-	-	-	-
	EOF-PLSG	Reciever: EOF to AAPL (at SYU)	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.70	-	-	-	-
	EOF-PLSG	Launcher: EOF to AAPL	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.40	-	-	-	-
Sump/Wastewater Tanks	EOF-S202	Sump Tank S-202	-	0.001	-	-	-	-	0.00	0.00	0.00	lb/ft2-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-TK201	Wash Tank TK-201	-	0.001	-	-	-	-	0.00	0.00	0.00	lb/ft2-day, lb CH4/ROC	PTO 7904.R10	-	0.03	-	-	-	-
	EOF-S203	Oil Sump S-203	-	0.018	-	-	-	-	0.00	0.00	0.00	lb/ft2-day, lb CH4/ROC	PTO 7904.R10	-	0.03	-	-	-	-
Loading Racks	EOF-RACK	Rack - LPG	-	0.0433	-	-	-	-	0.00	0.00	0.00	lb/load, lb CH4/ROC	SBCAPCD Spreads	-	0.04	-	-	-	-
	EOF-RACK	Rack - NGL	-	0.0282	-	-	-	-	0.00	0.00	0.00	lb/load, lb CH4/ROC	SBCAPCD Spreads	-	0.03	-	-	-	-
	EOF-RACK	Rack - Emulsion Breaker	-	1.079	-	-	-	-	0.00	0.00	0.00	lb/1000 gallons, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
Fugitive Cmpnnts, Gas/LL	EOF-FUGG-VALVES	Valves: Accessible	-	0.08	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	11.73	-	-	-	-
	EOF-FUGG-VALVESi	Valves: Inaccessible	-	0.08	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.01	-	-	-	-
	EOF-FUGG-VALVESU	Valves: Unsafe	-	0.402	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.10	-	-	-	-
	EOF-FUGG-CONN	Connectors: Accessible	-	0.005	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	4.04	-	-	-	-
	EOF-FUGG-CONNi	Connectors: Inaccessible	-	0.005	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.48	-	-	-	-
	EOF-FUGG-CONNu	Connectors: Unsafe	-	0.025	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.08	-	-	-	-
	EOF-FUGG-CS	Compressor Seal	-	0.432	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.36	-	-	-	-
	EOF-FUGG-PRV	Press. Relief Valves: Accessible	-	0.139	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.04	-	-	-	-
	EOF-FUGG-PRVi	Press. Relief Valves: Inaccessible	-	0.139	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGG-PRVu	Press. Relief Valves: Unsafe	-	0.696	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGG-PS	Pump Seal	-	0.521	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.22	-	-	-	-
Fugitive Cmpnnts, Oil	EOF-FUGO-VALVES	Valves: Accessible	-	0.028	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.75	-	-	-	-
	EOF-FUGO-VALVES	Valves: Accessible Cat E	-	0.017	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.05	-	-	-	-
	EOF-FUGO-CONN	Connectors: Accessible	-	0.005	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.65	-	-	-	-
	EOF-FUGO-CONN	Connectors: Accessible Cat E	-	0.003	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.04	-	-	-	-
	EOF-FUGO-CONNu	Connectors: Unsafe	-	0.023	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGO-PRV	Press. Relief Valves: Accessible	-	0.115	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGO-PS	Pump Seal	-	0.086	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.03	-	-	-	-
Solvent/Coatings	EOF-SOL	Cleanin/Degreasing	-	789.68	-	-	-	-	0.00	0.00	0.00	g/l	2014 CVR	-	24.41	-	-	-	-
	EOF-SCOAT	Surface Coating	-	250.00	-	-	-	-	0.00	0.00	0.00	g/l	2014 CVR	-	23.37	-	-	-	-
Other Equipment	EOF-EFP	Emergency Fire Pump	4.09	0.33	0.87	0.53	0.290	0.287	163.05	1E-05	0.0066	lb/MMBtu	CVR 2014- K	4.55	0.37	0.97	0.59	0.32	0.32
	EOF-EG	Emergency Generator	4.09	0.33	0.87	0.53	0.290	0.287	163.05	1E-05	0.0066	lb/MMBtu	CVR 2014- K	11.21	0.90	2.39	1.45	0.80	0.79
TOTAL EOF Emissions																			

South Ellwood Air Emissions: Baseline Operations
Platform Holly Facilities

			Emission Factors											Hourly Emissions, lbs/hr					
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**Sox**	**PM10**	**PM2.5**	**CO2**	**N2O**	**CH4**	**Units**		**NOx**	**ROC**	**CO**	**SOx**	**PM10**	**PM2.5**
Combustion: Flare	HOLLY-FLAREpi	Flare Planned - Pilot	0.068	0.086	0.37	0.002	0.02	0.02	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.01	0.02	0.08	0.00	0.00	0.00
	HOLLY-FLAREp	Flare Planned - Purge	0.068	0.086	0.37	0.037	0.02	0.02	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.16	0.20	0.85	0.09	0.05	0.05
	HOLLY-FLAREpu	Flare Planned - LP Purge	0.068	0.086	0.37	0.037	0.02	0.02	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.02	0.03	0.12	0.01	0.01	0.01
	HOLLY-FLAREi	Flare Planned - Intermittent	0.068	0.086	0.37	0.037	0.02	0.02	162.70	0.0002	0.02476	lb/MMBtu	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-FLAREu	Flare Unplanned	0.068	0.086	0.37	2.612	0.02	0.02	162.70	0.0002	0.02476	lb/MMBtu	2014 CVR	0.59	0.74	3.20	22.57	0.17	0.17
Fugitive Cmpnnts	HOLLY-FUGO	Oil, controlled	-	0.0009	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	2014 CVR	-	0.15	-	-	-	-
	HOLLY-FUGOu	Oil, unsafe	-	0.0044	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	2014 CVR	-	0.00	-	-	-	-
	HOLLY-FUGG	Gas, controlled	-	0.0147	-	-	-	-	1.06	0.00	1.35	lbs/clp-day, lb CH4/ROC	2014 CVR	-	8.62	-	-	-	-
	HOLLY-FUGGu	Gas, unsafe	-	0.0736	-	-	-	-	1.06	0.00	1.35	lbs/clp-day, lb CH4/ROC	2014 CVR	-	2.96	-	-	-	-
Pigging Equip.	HOLLY-PIGO	Oil Launcher	-	0.016	-	-	-	-	0.00	0.00	0.00	lb ROC/acf-ev.	2014 CVR	-	0.02	-	-	-	-
	HOLLY-PIGU	Utility Gas Launcher	-	0	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev.	2014 CVR	-	0.00	-	-	-	-
	HOLLY-PIGG	Gas Launcher	-	0	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev.	2014 CVR	-	0.00	-	-	-	-
Sumps/Tanks/Separators	HOLLY-T1	Oil surge tank (T-1)	-	0.0058	-	-	-	-	0.00	0.00	0.00	lb/ft2-day	2014 CVR	-	0.01	-	-	-	-
	HOLLY-T4	Overflow sump tank (T-4)	-	0.0058	-	-	-	-	0.00	0.00	0.00	lb/ft2-day	2014 CVR	-	0.03	-	-	-	-
Solvent/Coatings	HOLLY-SOL	Cleanin/Degreasing	-	-	-	-	-	-	0.00	0.00	0.00	actual numbers from CVR	2014 CVR	-	0.37	-	-	-	-
	HOLLY-SCOAT	Surface Coating	-	250.00	-	-	-	-	0.00	0.00	0.00	g/l	2014 CVR	-	191.10	-	-	-	-
Boom Boat	HOLLY-BB	Boom Boat	7.2	4.9	1357.34	0.27	48.10	48.100	517.70	0.00	0.02	g/bhp-hr	2014 CVR, permit	2.32	1.58	437.68	0.09	15.51	15.51
ICEs	HOLLY-EG	Backup Emergency Generator	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	3.19	0.26	0.69	0.30	0.22	0.22
	HOLLY-CRANE	Pedestal Crane	0.11	0.01	0.1	0.0002	0.0004	0.0004	22	0.000	0.001	lb/gal	2014 CVR	1.55	0.14	1.41	0.00	0.01	0.01
	HOLLY-DGEN1	Generator 1, NSCR, well maintenance	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.03	0.01	0.06	0.00	0.01	0.01
	HOLLY-DGEN2	Generator 2, NSCR, well maintenance	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.03	0.01	0.06	0.00	0.01	0.01
	HOLLY-DGEN3	Generator 3, NSCR, well maintenance	0.143	0.143	0.215	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.03	0.03	0.04	0.00	0.01	0.01
Supply Boat	HOLLY-SBmain	Supply Boat Main Engines	561	16.800	78.3	56.34	31.68	31.395	22296	0.002	0.904	lb/1000 gallons	2014 CVR	151.53	4.54	21.15	15.22	8.56	8.48
	HOLLY-SBgen	Supply Boat Generator Engines	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-SBBT	Supply Boat Bow Thruster	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
Crew Boat	HOLLY-CBM	Crew Boat Main Engines	561	44.500	99.7	56.34	31.68	31.395	22296	0.002	0.904	lb/1000 gallons	2014 CVR	45.83	3.64	8.15	4.60	2.59	2.56
	HOLLY-CBA	Crew Boat Auxillary Engines	600	48.980	129.26	56.34	40.49	40.126	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
Helicopters	HOLLY-HELIO	Heliocopter	1.58	0.68	3.82	0.15	5.98	4.19	396.71	0.00	0.02	lb/flight	2014 CVR, EPA	1.58	0.68	3.82	0.15	5.98	4.19
Total Platform Holly																			

Platform Holly Drilling Equipment

			Emission Factors											Peak Hourly Emissions, lbs/hr					
Equipment Category		**Description**	**NOx**	**ROC**	**CO**	**Sox**	**PM10**	**PM2.5**	**CO2**	**N2O**	**CH4**	**Units**		**NOx**	**ROC**	**CO**	**SOx**	**PM10**	**PM2.5**
ICEs	HOLLY-DCRANE	Crane	4.41	0.3	0.95	0.05	0.3	0.297	163.05	1E-05	0.0066	lb/MMBtu	2014 CVR	0.82	0.06	0.18	0.01	0.06	0.06
	HOLLY-DELU	Electric Line Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DSLU	Slick Line Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DHU	Hydraulic Unit for Casing Tongs	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DCTU	Coil Tubing Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DCU	Cement Unit	4.41	0.3	0.95	0.05	0.3	0.297	163.05	1E-05	0.0066	lb/MMBtu	2014 CVR	4.31	0.29	0.93	0.05	0.29	0.29
	HOLLY-DC	Compressor	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DNU	Nitrogen Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DWKP	Well Kill Pump ICE	4.41	0.3	0.95	0.05	0.3	0.297	163.05	1E-05	0.0066	lb/MMBtu	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DDGEN1	Generator 1, NSCR, well drilling	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.35	0.08	0.62	0.03	0.10	0.10
	HOLLY-DDGEN2	Generator 2, NSCR, well drilling	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.35	0.08	0.62	0.03	0.10	0.10
	HOLLY-DDGEN3	Generator 3, NSCR, well drilling	0.143	0.143	0.215	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.32	0.32	0.49	0.03	0.10	0.10
TOTAL Drilling														**6.16**	**0.83**	**2.83**	**0.14**	**0.65**	**0.65**

South Ellwood Air Emissions: Baseline Operations

EOF Facilities

			Daily Emissions, lbs/day						Annual Emissions, tons/yr						MT/Year			
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**	**CO2**	**N2O**	**CH4**	**CO2e**
Combustion-External	EOF-H201	Heater Treater H-201	0.29	0.02	0.25	0.04	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.000	0.000	0
	EOF-H202	Heater Treater H-202	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0
	EOF-H203	Heater Treater H-203	1.96	0.10	1.64	0.24	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00	1.26	0.000	0.000	1
	EOF-H204	Process Heater H-204	3.40	0.47	28.01	3.49	0.66	0.66	0.62	0.09	5.11	0.64	0.12	0.12	2884	0.003	0.580	2,900
Combustion: Flares	EOF-H205pi	Thermal Oxidizer H-205, Pilot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	EOF-H205p	Thermal Oxidizer H-205, Planned	18.76	1.27	46.89	14.39	6.56	6.56	3.21	0.22	8.02	2.46	1.12	1.12	11844	0.016	2.195	11,903
	EOF-H205u	Thermal Oxidizer H-205, Unplanned	2.12	0.14	5.30	77.91	0.74	0.74	0.00	0.00	0.00	0.04	0.00	0.00	4	0.000	0.001	4
	EOF-H206pi	Thermal Oxidizer H-206, Pilot	0.57	0.02	3.02	0.25	0.11	0.11	0.10	0.00	0.55	0.05	0.02	0.02	188	0.000	0.031	189
	EOF-H206p	Thermal Oxidizer H-206, Planned	0.94	0.05	3.53	0.29	0.13	0.13	0.16	0.01	0.60	0.05	0.02	0.02	278	0.000	0.056	280
	EOF-H206u	Thermal Oxidizer H-206, Unplanned	4.70	0.26	17.76	70.56	0.67	0.67	0.00	0.00	0.01	0.04	0.00	0.00	4	0.000	0.001	4
	EOF-H207pi	Thermal Oxidizer H-207, Pilot	1.68	0.07	8.88	0.74	0.34	0.34	0.31	0.01	1.62	0.13	0.06	0.06	552	0.001	0.090	554
	EOF-H207p	Thermal Oxidizer H-207, Planned (uprated)	2.51	0.14	9.49	0.79	0.36	0.36	0.43	0.02	1.62	0.13	0.06	0.06	747	0.001	0.152	752
	EOF-H207u	Thermal Oxidizer H-207, Unplanned	8.13	0.45	30.71	122.01	1.16	1.16	0.00	0.00	0.02	0.06	0.00	0.00	7	0.000	0.001	7
Oil Storage Tanks	EOF-T202	Oil Tank T-202	-	4.09	-	-	-	-	-	0.75	-	-	-	-	0	0.000	0.000	0
	EOF-T203	Oil Tank T-203	-	4.09	-	-	-	-	-	0.75	-	-	-	-	0	0.000	0.000	0
	EOF-T204	Oil Tank T-204	-	0.59	-	-	-	-	-	0.11	-	-	-	-	0	0.000	0.000	0
	EOF-T101	EB Tank T-101	-	1.15	-	-	-	-	-	0.21	-	-	-	-	0	0.000	0.000	0
Pigging Equipment	EOF-PROE	Receiver: oil emulsion	-	0.09	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.004	0
	EOF-PRU	Receiver: utility	-	0.09	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-PRPG	Receiver: produced gas	-	0.02	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.001	0
	EOF-PLSG	Launcher: seep gas	-	0.02	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-PLSG	Reciever: EOF to AAPL (at SYU)	-	0.70	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.005	0
	EOF-PLSG	Launcher: EOF to AAPL	-	0.40	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.003	0
Sump/Wastewater Tanks	EOF-S202	Sump Tank S-202	-	0.03	-	-	-	-	-	0.01	-	-	-	-	0	0.000	0.000	0
	EOF-TK201	Wash Tank TK-201	-	0.71	-	-	-	-	-	0.13	-	-	-	-	0	0.000	0.000	0
	EOF-S203	Oil Sump S-203	-	0.69	-	-	-	-	-	0.13	-	-	-	-	0	0.000	0.000	0
Loading Racks	EOF-RACK	Rack - LPG	-	0.09	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-RACK	Rack - NGL	-	0.03	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-RACK	Rack - Emulsion Breaker	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
Fugitive Cmpnnts, Gas/LL	EOF-FUGG-VALVES	Valves: Accessible	-	281.52	-	-	-	-	-	51.38	-	-	-	-	32	0.000	47.164	1,211
	EOF-FUGG-VALVESi	Valves: Inaccessible	-	0.32	-	-	-	-	-	0.06	-	-	-	-	0	0.000	0.054	1
	EOF-FUGG-VALVESU	Valves: Unsafe	-	2.41	-	-	-	-	-	0.44	-	-	-	-	0	0.000	0.404	10
	EOF-FUGG-CONN	Connectors: Accessible	-	97.03	-	-	-	-	-	17.71	-	-	-	-	11	0.000	16.256	417
	EOF-FUGG-CONNi	Connectors: Inaccessible	-	11.64	-	-	-	-	-	2.12	-	-	-	-	1	0.000	1.949	50
	EOF-FUGG-CONNu	Connectors: Unsafe	-	1.95	-	-	-	-	-	0.36	-	-	-	-	0	0.000	0.327	8
	EOF-FUGG-CS	Compressor Seal	-	8.64	-	-	-	-	-	1.58	-	-	-	-	1	0.000	1.448	37
	EOF-FUGG-PRV	Press. Relief Valves: Accessible	-	0.97	-	-	-	-	-	0.18	-	-	-	-	0	0.000	0.163	4
	EOF-FUGG-PRVi	Press. Relief Valves: Inaccessible	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGG-PRVu	Press. Relief Valves: Unsafe	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGG-PS	Pump Seal	-	5.21	-	-	-	-	-	0.95	-	-	-	-	1	0.000	0.873	22
Fugitive Cmpnnts, Oil	EOF-FUGO-VALVES	Valves: Accessible	-	18.12	-	-	-	-	-	3.31	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-VALVES	Valves: Accessible Cat E	-	1.24	-	-	-	-	-	0.23	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-CONN	Connectors: Accessible	-	15.60	-	-	-	-	-	2.85	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-CONN	Connectors: Accessible Cat E	-	0.94	-	-	-	-	-	0.17	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-CONNu	Connectors: Unsafe	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-PRV	Press. Relief Valves: Accessible	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-PS	Pump Seal	-	0.60	-	-	-	-	-	0.11	-	-	-	-	0	0.000	0.000	0
Solvent/Coatings	EOF-SOL	Cleanin/Degreasing	-	24.41	-	-	-	-	-	0.07	-	-	-		0.00	0.000	0.000	0
	EOF-SCOAT	Surface Coating	-	23.37	-	-	-	-	-	0.03	-	-	-		0.00	0.000	0.000	0
Other Equipment	EOF-EFP	Emergency Fire Pump	2.27	0.18	0.48	0.29	0.16	0.16	0.06	0.00	0.01	0.01	0.00	0.00	2	0.000	0.000	2
	EOF-EG	Emergency Generator	11.21	0.90	2.39	1.45	0.80	0.79	0.07	0.01	0.01	0.01	0.00	0.00	2	0.000	0.000	2
TOTAL EOF Emissions			**43.59**	**509.98**	**104.58**	**21.98**	**9.28**	**9.28**	**4.96**	**83.98**	**17.6**	**3.62**	**1.42**	**1.42**	**16,561**	**0.02**	**71.76**	**18,361**

South Ellwood Air Emissions: Baseline Operations
Platform Holly Facilities

			Daily Emissions, lbs/day						Annual Emissions, tons/yr						MT/Yr			
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**CO2**	**N2O**	**CH4**	**CO2e**
Combustion: Flare	HOLLY-FLAREpi	Flare Planned - Pilot	0.18	0.23	0.98	0.01	0.05	0.05	0.03	0.04	0.18	0.00	0.01	0.01	61	0.000	0.010	61
	HOLLY-FLAREp	Flare Planned - Purge	0.60	0.76	3.28	0.33	0.18	0.18	0.11	0.14	0.60	0.06	0.03	0.03	204	0.000	0.033	205
	HOLLY-FLAREpu	Flare Planned - LP Purge	0.04	0.05	0.21	0.02	0.01	0.01	0.01	0.01	0.04	0.00	0.00	0.00	13	0.000	0.002	13
	HOLLY-FLAREi	Flare Planned - Intermittent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-FLAREu	Flare Unplanned	0.59	0.74	3.20	22.57	0.17	0.17	0.00	0.00	0.00	0.01	0.00	0.00	1	0.000	0.000	1
Fugitive Cmpnnts	HOLLY-FUGO	Oil, controlled	-	3.59	-	-	-	-	-	0.66	-	-	-	-	0	0.000	0.000	0
	HOLLY-FUGOu	Oil, unsafe	-	0.06	-	-	-	-	-	0.01	-	-	-	-	0	0.000	0.000	0
	HOLLY-FUGG	Gas, controlled	-	206.78	-	-	-	-	-	37.74	-	-	-	-	36	0.000	45.852	1,182
	HOLLY-FUGGu	Gas, unsafe	-	70.95	-	-	-	-	-	12.95	-	-	-	-	12	0.000	15.732	406
Pigging Equip.	HOLLY-PIGO	Oil Launcher	-	0.02	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	HOLLY-PIGU	Utility Gas Launcher	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	HOLLY-PIGG	Gas Launcher	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
													-	-				
Sumps/Tanks/Separators	HOLLY-T1	Oil surge tank (T-1)	-	0.26	-	-	-	-	-	0.05	-	-	-	-	0	0.000	0.000	0
	HOLLY-T4	Overflow sump tank (T-4)	-	0.66	-	-	-	-	-	0.12	-	-	-	-	0	0.000	0.000	0
Solvent/Coatings	HOLLY-SOL	Cleanin/Degreasing	-	3.04	-	-	-	-	-	0.34	-	-	-	-	0	0.000	0.000	0
	HOLLY-SCOAT	Surface Coating	-	191.10	-	-	-	-	-	0.24	-	-	-	-	0	0.000	0.000	0
Boom Boat	HOLLY-BB	Boom Boat	3.48	2.37	656.52	0.13	23.26	23.26	0.00	0.00	0.33	0.00	0.01	0.01	0	0.000	0.000	0
ICEs	HOLLY-EG	Backup Emergency Generator	3.19	0.26	0.69	0.30	0.22	0.22	0.03	0.00	0.01	0.00	0.00	0.00	1	0.000	0.000	1
	HOLLY-CRANE	Pedestal Crane	9.10	0.83	8.27	0.02	0.03	0.03	0.46	0.04	0.42	0.00	0.00	0.00	93	0.000	0.004	93
	HOLLY-DGEN1	Generator 1, NSCR, well maintenance	0.76	0.17	1.33	0.06	0.21	0.21	0.14	0.03	0.24	0.01	0.04	0.04	116	0.000	0.019	117
	HOLLY-DGEN2	Generator 2, NSCR, well maintenance	0.76	0.17	1.33	0.06	0.21	0.21	0.14	0.03	0.24	0.01	0.04	0.04	116	0.000	0.019	117
	HOLLY-DGEN3	Generator 3, NSCR, well maintenance	0.69	0.69	1.04	0.06	0.22	0.22	0.13	0.13	0.19	0.01	0.04	0.04	124	0.000	0.020	125
Supply Boat	HOLLY-SBmain	Supply Boat Main Engines	539.12	16.14	75.25	54.14	30.44	30.17	17.94	0.54	2.50	1.80	1.01	1.00	642	0.000	0.026	642
	HOLLY-SBgen	Supply Boat Generator Engines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-SBBT	Supply Boat Bow Thruster	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
Crew Boat	HOLLY-CBM	Crew Boat Main Engines	90.0	7.1	16.0	9.0	5.1	5.0	14.41	1.14	2.56	1.45	0.81	0.81	573	0.000	0.023	573
	HOLLY-CBA	Crew Boat Auxillary Engines	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
Helicopters	HOLLY-HELIO	Heliocopter	1.58	0.68	3.82	0.15	5.98	4.19	0.00	0.00	0.00	0.00	0.01	0.00	0	0.000	0.000	0
Total Platform Holly			**650.08**	**506.70**	**771.90**	**86.88**	**66.09**	**63.97**	**33.394**	**54.204**	**7.312**	**3.362**	**2.010**	**1.991**	**1,991**	**0.001**	**61.7**	**3,535**

Platform Holly Drilling Equipment

			Peak Daily Emissions, lbs/day						Annual Emissions, tons/yr						MT/Yr			
Equipment Category		**Description**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**CO2**	**N2O**	**CH4**	**CO2e**
ICEs	HOLLY-DCRANE	Crane	6.54	0.45	1.41	0.07	0.45	0.44	0.33	0.02	0.07	0.00	0.02	0.02	11	0.000	0.000	11
	HOLLY-DELU	Electric Line Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DSLU	Slick Line Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DHU	Hydraulic Unit for Casing Tongs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DCTU	Coil Tubing Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DCU	Cement Unit	34.51	2.35	7.43	0.39	2.35	2.33	0.25	0.02	0.05	0.00	0.02	0.02	8	0.000	0.000	8
	HOLLY-DC	Compressor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DNU	Nitrogen Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DWKP	Well Kill Pump ICE	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.01	0.00	0.00	0.00	1	0.000	0.000	1
	HOLLY-DDGEN1	Generator 1, NSCR, well drilling	8.47	1.89	14.89	0.66	2.35	2.35	0.57	0.13	1.01	0.04	0.16	0.16	481	0.0008	0.0781	484
	HOLLY-DDGEN2	Generator 2, NSCR, well drilling	8.47	1.89	14.89	0.66	2.35	2.35	0.57	0.13	1.01	0.04	0.16	0.16	481	0.0008	0.0781	484
	HOLLY-DDGEN3	Generator 3, NSCR, well drilling	7.78	7.78	11.70	0.71	2.50	2.50	0.53	0.53	0.79	0.05	0.17	0.17	514	0.0008	0.0834	516
TOTAL Drilling			**65.78**	**14.35**	**50.3**	**2.50**	**9.99**	**9.96**	**2.29**	**0.82**	**2.94**	**0.14**	**0.53**	**0.53**	**1,497**	**0.002**	**0.240**	**1,504**

South Ellwood Air Emissions: Proposed Project
EOF Facilities

									Operating Schedule						
Equipment Category	**Code**	**Description**	**Fuel or Service**	**Parameter**	**Size**	**Units**	**Capacity**	**Units**	**Actual Annual Use**	**Units**	**Peak Day Use**	**Units**	**Peak Day Hours**	**Yearly Days**	**Load**
				S, ppmv											
Combustion-External	EOF-H201	Heater Treater H-201	Fuel Gas	80	4.399	MMBtu/hr	4.399	MMBtu/hr	3	mmbtu	3.0	mmbtu/day	0.68	0.03	0.00
	EOF-H202	Heater Treater H-202	Fuel Gas	80	2.464	MMBtu/hr	2.464	MMBtu/hr	0	mmbtu	0.0	mmbtu/day	0.00	0.00	0.00
	EOF-H203	Heater Treater H-203	Fuel Gas	80	4.399	MMBtu/hr	4.399	MMBtu/hr	20	mmbtu	20.0	mmbtu/day	4.55	0.19	0.00
	EOF-H204	Process Heater H-204	FG/Permeate	239	25.000	MMBtu/hr	25.000	MMBtu/hr	172,530	mmbtu	486.0	mmbtu/day	24.00	355	0.79
Combustion: Flares	EOF-H205pi	Thermal Oxidizer H-205, Pilot	Fuel Gas	205	-	MMBtu/hr	-	MMBtu/hr	0	mmbtu	0	mmbtu/day	0.00	0.00	1.00
	EOF-H205p	Thermal Oxidizer H-205, Planned	FG/Permeate	205	35.00	MMBtu/hr	35.000	MMBtu/hr	201,680	mmbtu	589.7	mmbtu/day	24.00	342	0.66
	EOF-H205u	Thermal Oxidizer H-205, Unplanned	FG/Permeate	15,000	140.00	MMBtu/hr	140.000	MMBtu/hr	53	mmbtu	53.0	mmbtu/day	0.38	0.02	0.00
	EOF-H206pi	Thermal Oxidizer H-206, Pilot	Fuel Gas	205	0.34	MMBtu/hr	0.34	MMBtu/hr	2,988	mmbtu	8.2	mmbtu/day	24.00	365	1.00
	EOF-H206p	Thermal Oxidizer H-206, Planned	Permeate	205	30.00	MMBtu/hr	30.00	MMBtu/hr	3,266	mmbtu	9.5	mmbtu/day	24.00	342	0.01
	EOF-H206u	Thermal Oxidizer H-206, Unplanned	Permeate	15,000	220.00	MMBtu/hr	220.00	MMBtu/hr	48	mmbtu	48.0	mmbtu/day	0.22	0.01	0.00
	EOF-H207pi	Thermal Oxidizer H-207, Pilot	Fuel Gas	205	1.00	MMBtu/hr	1.00	MMBtu/hr	8,771	mmbtu	24.0	mmbtu/day	24.00	365	1.00
	EOF-H207p	Thermal Oxidizer H-207, Planned	Permeate	205	30.00	MMBtu/hr	30.00	MMBtu/hr	8,771	mmbtu	25.6	mmbtu/day	24.00	342	0.03
	EOF-H207u	Thermal Oxidizer H-207, Unplanned	Permeate	15,000	30.00	MMBtu/hr	30.00	MMBtu/hr	83	mmbtu	83.0	mmbtu/day	2.77	0.12	0.00
				RVP											
Oil Storage Tanks	EOF-T202	Oil Tank T-202	Oil	4.8	35'd x 16'h	feet	13,000	bbl/day	1.99E+08	gal/yr	-	-	24.0		1.00
	EOF-T203	Oil Tank T-203	Oil	4.8	35'd x 16'h	feet	13,000	bbl/day	1.99E+08	gal/yr	-	-	24.0		1.00
	EOF-T204	Oil Tank T-204	Oil	4.8	30'd x 24'h	feet	1,000	bbl/day	1.53E+07	gal/yr	-	-	24.0		1.00
	EOF-T101	EB Tank T-101	HC	1.5	12'd x 20'h	feet	-	bbl/day	0.00E+00	gal/yr	-	-	24.0		1.00
				psig											
Pigging Equipment	EOF-PROE	Receiver: oil emulsion	oil	1	0.33'd x 4.5'l	feet	1.13	acf-event	79	events/yr	1.00	events/dy	1.0	79.0	-
	EOF-PRU	Receiver: utility	gas or oil	1	0.33'd x 4.5'l	feet	1.13	acf-event	2	events/yr	1.00	events/dy	1.0	2.0	-
	EOF-PRPG	Receiver: produced gas	gas	1	0.33'd x 4.5'l	feet	1.13	acf-event	49	events/yr	1.00	events/dy	1.0	49.0	-
	EOF-PLSG	Launcher: seep gas	gas	1	0.33'd x 4.5'l	feet	1.13	acf-event	0	events/yr	1.00	events/dy	1.0	0.0	-
	EOF-PLSG	Reciever: EOF to AAPL (at SYU)	oil	1	0.83'd x 12'l	feet	9.24	acf-event	12	events/yr	1.00	events/dy	1.0	12.0	-
	EOF-PLSG	Launcher: EOF to AAPL	oil	1	0.67'd x 12'l	feet	5.21	acf-event	12	events/yr	1.00	events/dy	1.0	12.0	-
Sump/Wastewater Tanks	EOF-S202	Sump Tank S-202	W/W	sec/VRS	6.5'dia	feet	33.18	sq. ft.	33.2	sq. ft.	-	-	24.0	365	-
	EOF-TK201	Wash Tank TK-201	W/W	sec/VRS	30.0' dia	feet	706.86	sq. ft.	706.9	sq. ft.	-	-	24.0	365	-
	EOF-S203	Oil Sump S-203	oil		7' dia	feet	38.48	sq. ft.	38.5	sq. ft.	-	-	24.0	365	-
Loading Racks	EOF-RACK	Rack - LPG	LPG/NGL	balanced	712	loading/yr	10	kgal/hr	6,264	kgal/yr	8800	gal/day	1.72	365	-
	EOF-RACK	Rack - NGL	LPG/NGL	balanced	1	loading/yr	10	kgal/hr	8.4	kgal/yr	8442	gal/day	0.84	1	-
	EOF-RACK	Rack - Emulsion Breaker	HC Liq.	submerged	0	loading/yr	7	kgal/hr	0	kgal/yr	0	gal/day	0	0	-
Fugitive Cmpnnts, Gas/LL	EOF-FUGG-VALVES	Valves: Accessible	Gas/Lt. Liq.	-	3,519	comp-lp	3,519	comp-lp			-	-	24.0	365	-
	EOF-FUGG-VALVESi	Valves: Inaccessible	Gas/Lt. Liq.	-	4	comp-lp	4	comp-lp			-	-	24.0	365	-
	EOF-FUGG-VALVESU	Valves: Unsafe	Gas/Lt. Liq.	-	6	comp-lp	6	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CONN	Connectors: Accessible	Gas/Lt. Liq.	-	19,406	comp-lp	19,406	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CONNi	Connectors: Inaccessible	Gas/Lt. Liq.	-	2,327	comp-lp	2,327	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CONNu	Connectors: Unsafe	Gas/Lt. Liq.	-	78	comp-lp	78	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CS	Compressor Seal	Gas/Lt. Liq.	-	20	comp-lp	20	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PRV	Press. Relief Valves: Accessible	Gas/Lt. Liq.	-	7	comp-lp	7	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PRVi	Press. Relief Valves: Inaccessible	Gas/Lt. Liq.	-	0	comp-lp	0	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PRVu	Press. Relief Valves: Unsafe	Gas/Lt. Liq.	-	0	comp-lp	0	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PS	Pump Seal	Gas/Lt. Liq.	-	10	comp-lp	10	comp-lp			-	-	24.0	365	-
				sub-total =	**25,377**		**25,377**								
Fugitive Cmpnnts, Oil	EOF-FUGO-VALVES	Valves: Accessible	Oil	-	647	comp-lp	647	comp-lp			-	-	24.0	365	-
	EOF-FUGO-VALVES	Valves: Accessible Cat E	Oil	-	73	comp-lp	73	comp-lp			-	-	24.0	365	-
	EOF-FUGO-CONN	Connectors: Accessible	Oil	-	3,120	comp-lp	3,120	comp-lp			-	-	24.0	365	-
	EOF-FUGO-CONN	Connectors: Accessible Cat E	Oil	-	314	comp-lp	314	comp-lp			-	-	24.0	365	-
	EOF-FUGO-CONNu	Connectors: Unsafe	Oil	-	0	comp-lp	0	comp-lp			-	-	24.0	365	-
	EOF-FUGO-PRV	Press. Relief Valves: Accessible	Oil	-	0	comp-lp	0	comp-lp			-	-	24.0	365	-
	EOF-FUGO-PS	Pump Seal	Oil	-	7	comp-lp	7	comp-lp			-	-	24.0	365	-
				sub-total =	**4,161**		**4,161**								
Solvent/Coatings	EOF-SOL	Cleanin/Degreasing	-	-	20.00	gal/yr	3.70	gal/day avg	790	g/l	3.70	gal/day	1	365	-
	EOF-SCOAT	Surface Coating	-	-	28.0	gal/yr	11.20	gal/day avg	250	g/l	11.20	gal/day	1	365	-
Other Equipment	EOF-EFP	Emergency Fire Pump	CARB Diesel		292	bhp	26	Hours/yr	28.9	mmbtu/yr	0.56	mmbtu/day	0.5	26.00	0.54
	EOF-EG	Emergency Generator	CARB Diesel		509	bhp	12	Hours/yr	32.9	mmbtu/yr	2.74	mmbtu/day	1.0	12.00	0.77
TOTAL EOF Emissions															

South Ellwood Air Emissions: Proposed Project
Platform Holly Facilities

									Operating Schedule						
Equipment Category	**Code**	**Description**	**Fuel or Service**	**Parameter**	**Size**	**Units**	**Capacity**	**Units**	**Actual Total Use**	**Units**	**Peak Day Use**	**Units**	**Peak Day Hours**	**Yearly Days**	**Load**
Combustion: Flare	HOLLY-FLAREpi	Flare Planned - Pilot	Fuel Gas	-	200	scfh	0.220	MMBtu/hr	964	mmbtu	2.6	mmbtu/day	24.00	365.00	0.50
	HOLLY-FLAREp	Flare Planned - Purge	Fuel Gas	-	2100	scfh	2.310	MMBtu/hr	3,236	mmbtu	8.9	mmbtu/day	24.00	365.00	0.16
	HOLLY-FLAREpu	Flare Planned - LP Purge	Fuel Gas	-	300	scfh	0.330	MMBtu/hr	209	mmbtu	0.6	mmbtu/day	24.00	365.00	0.07
	HOLLY-FLAREi	Flare Planned - Intermittent	Holly Gas	-	0	scfh	0.000	MMBtu/hr	0	mmbtu	0.0	mmbtu/day	0.00	0.00	0.00
	HOLLY-FLAREu	Flare Unplanned	Holly Gas	-	480000	scf/yr	528.000	MMBtu/hr	8.6	mmbtu	8.6	mmbtu/day	0.02	0.00	0.00
Fugitive Cmpnnts	HOLLY-FUGO	Oil, controlled	Oil	-	3992	comp-lp	-	-			-	-	24.0	365	-
	HOLLY-FUGOu	Oil, unsafe	Oil	-	14	comp-lp	-	-			-	-	24.0	365	-
	HOLLY-FUGG	Gas, controlled	Gas	-	14067	comp-lp	-	-			-	-	24.0	365	-
	HOLLY-FUGGu	Gas, unsafe	Gas	-	964	comp-lp	-	-			-	-	24.0	365	-
Pigging Equip.	HOLLY-PIGO	Oil Launcher	Gas	-	5.00	psi	1.40	ft3	79	events/yr	1.00	events/dy	1.0	79.0	-
	HOLLY-PIGU	Utility Gas Launcher	Gas	-	5.00	psi	1.40	ft3	2	events/yr	1.00	events/dy	1.0	2.0	-
	HOLLY-PIGG	Gas Launcher	Gas	-	5.00	psi	1.40	ft3	49	events/yr	1.00	events/dy	1.0	49.0	-
Sumps/Tanks/Separators	HOLLY-T1	Oil surge tank (T-1)	-	-	44.2	ft2	-	-			-	-	24.0	365	-
	HOLLY-T4	Overflow sump tank (T-4)	-	-	113.2	ft2	-	-			-	-	24.0	365	-
Solvent/Coatings	HOLLY-SOL	Cleanin/Degreasing	-	-	177.6	gal/yr	32.89	gal/day avg	250	g/l	32.89	gal/day	1	365	-
	HOLLY-SCOAT	Surface Coating	-	-	229	gal/yr	91.60	gal/day avg	250	g/l	91.60	gal/day	1	365	-
Boom Boat	HOLLY-BB	Boom Boat	Gas	-	225	bhp-total	0.1	gal/hp-hr	1.5	hrs/yr	1.5	hrs/day	1.5	1	0.65
ICEs	HOLLY-EG	Backup Emergency Generator	D2	-	373.00	bhp	21.2	gallons/hr	0.09	kgal/yr	0.030	kgal/day	0.25	3	0.00
	HOLLY-CRANE	Pedestal Crane	D2	-	250.00	bhp	14.1	gallons/hr	8.311	kgal/yr	0.083	kgal/day	5.9	298	0.34
	HOLLY-DGEN1	Generator 1, NSCR, well maintenance	NG	-	803	hp	7.59	mmbtu/hr	1,662	mmbtu	4.6	mmbtu/day	24	365	0.025
	HOLLY-DGEN2	Generator 2, NSCR, well maintenance	NG	-	803	hp	7.59	mmbtu/hr	1,662	mmbtu	4.6	mmbtu/day	24	365	0.025
	HOLLY-DGEN3	Generator 3, NSCR, well maintenance	NG	-	1053	hp	8.10	mmbtu/hr	1,774	mmbtu	4.9	mmbtu/day	24	365	0.025
Supply Boat	HOLLY-SBmain	Supply Boat Main Engines	D2	-	4920.00	bhp-total	270.10	gal/hr	124.1	kGal/yr	961	gal/day	3.6	365	0.65
	HOLLY-SBgen	Supply Boat Generator Engines	D2	-	530.00	bhp-total	29.10	gal/hr	0	kGal/yr	0	gal/day	0.0	365	0.50
	HOLLY-SBBT	Supply Boat Bow Thruster	D2	-	530.00	bhp-total	29.10	gal/hr	0	kGal/yr	0	gal/day	0.0	365	0.50
Crew Boat	HOLLY-CBM	Crew Boat Main Engines	D2	-	1605.00	bhp-total	81.70	gal/hr	53.9	kGal/yr	160.4	gal/day	2.0	365	0.85
	HOLLY-CBA	Crew Boat Auxillary Engines	D2	-	131.00	bhp-total	7.20	gal/hr	0	kGal/yr	0	gal/day	0.0	365	0.50
Helicopters	HOLLY-HELIO	Heliocopter	AG	-			20.79	gal/RT Flight	2	flights/yr					
Total Platform Holly															

Platform Holly Drilling Equipment

								Operating Schedule							
Equipment Category		**Description**	**Fuel or Service**	**Size**	**Units**	**Capacity**	**Units**	**Actual Total Use**	**Units**	**Actual Total Gallons**	**Peak Day Use**	**Units**	**Peak Day Hours**	**Hrs/ well or Yearly Days**	**Ann. Avg Load**
ICEs	HOLLY-DCRANE	Crane	D2	92	hp	4.7	gallons/hr	294	mmbtu/yr	2,158	-	-	8	786	0.29
	HOLLY-DELU	Electric Line Unit	D2	121	hp	0.0	electric	0	mmbtu/yr	0	-	-	0	48	0.42
	HOLLY-DSLU	Slick Line Unit	D2	90	hp	0.0	electric	0	mmbtu/yr	0	-	-	4	48	0.42
	HOLLY-DHU	Hydraulic Unit for Casing Tongs	D2	90	hp	0.0	electric	0	mmbtu/yr	0	-	-	4	472	0.42
	HOLLY-DCTU	Coil Tubing Unit	D2	210	hp	0.0	electric	0	mmbtu/yr	0	-	-	0	629	0.42
	HOLLY-DCU	Cement Unit	D2	335	hp	17.1	gallons/hr	189	mmbtu/yr	1,390	-	-	8	96	0.42
	HOLLY-DC	Compressor	D2	110	hp	0.0	electric	0	mmbtu/yr	0	-	-	2	1572	0.42
	HOLLY-DNU	Nitrogen Unit	D2	345	hp	0.0	electric	0	mmbtu/yr	0	-	-	0	48	0.42
	HOLLY-DWKP	Well Kill Pump ICE	D2	110	hp	5.6	gallons/hr	31	mmbtu/yr	228	-	-	0	48	0.42
	HOLLY-DDGEN1	Generator 1, NSCR, well drilling	NG	803	hp	7.59	mmbtu/hr	19,090	mmbtu/yr	-	72.9	mmbtu/day	24	262	0.29
	HOLLY-DDGEN2	Generator 2, NSCR, well drilling	NG	803	hp	7.59	mmbtu/hr	19,090	mmbtu/yr	-	72.9	mmbtu/day	24	262	0.29
	HOLLY-DDGEN3	Generator 3, NSCR, well drilling	NG	1053	hp	8.10	mmbtu/hr	20,373	mmbtu/yr	-	77.8	mmbtu/day	24	262	0.29
TOTAL Drilling															

South Ellwood Air Emissions: Proposed Project

NOTES

1) Daily average crude oil production, 2014 CVR average, bopd (used permit limit)	13,000	
2) Daily average gas production, 2014 CVR average, mscfd (used permit limit)	13,000	
3) LPG/NGL production annual, gallons	14,833,770	
4) LPG/NGL fraction into crude, as per 2015 operations	0.0436	
4) LPG/NGL production mixed with crude into pipeline (based on 2014 fraction)	8,569,848	
5) Wells drilled, number	2	
6) Time per well drilled, days	131	
7) Days per year crude plant operating	360	
8) Days per year gas plant operating	342	
7) Estimated total annual fuel use, gas, mmbtu, EOF + Holly	407,729	mmbtu/yr
8) EOF Heaters and flare total (baseline annual total of 224,248 mmbtu)	398,213	mmbtu/yr
9) DPM PM2.5/PM10 ratio, from SCAQMD CEIDARS	0.991	Distillate non-electrical generation, PM2.5/PM10 fraction

10) Drilling generators assumed to operate at 40% load during drilling, estimated in coordination with Applicant due to longer wells

11) Supply boat assumed to operate during drilling only

12) Loading rack ROC emission factor was corrected to be 4.8 lb ROC/kgal transferred with a 95% vapor recovery efficiency (0.24), see APCD HRA Report for inventory year 2008 DRAFT

13) Loading rack loading rate was also corrected to 10 kgal/hr as per APCD HRA report for 2008 inventory year DRAFT

14) EOF Heater use linearly increased by crude throughput increase

15) Supply boat maximum daily fuel use of 961 gallons as per Applicant submittals for 4 trips per day from Casitas Pier

16) Crew boat peak day fuel use increased by 15% during drilling only

17) Increase in crude tanks fugitive emissions, fraction	2.7
18) Total new wells drilled (used to estimate long term emissions for HRA)	6
19) Average days per new well drilled (used to estimate long term emissions for HRA)	120
20) Platform Holly drilling generators peak day load average	0.40
21) Holly diesel fuel use, crane plus drilling, gallons	12,178

South Ellwood Air Emissions: Proposed Project
EOF Facilities

			Emission Factors											Hourly Emissions, lbs/hr					
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**Sox**	**PM10**	**PM2.5**	**CO2**	**N2O**	**CH4**	**Units**	**EF Source**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Combustion-External	EOF-H201	Heater Treater H-201	0.098	0.005	0.082	0.012	0.0070	0.0070	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.29	0.02	0.25	0.04	0.02	0.02
	EOF-H202	Heater Treater H-202	0.098	0.005	0.082	0.012	0.0070	0.0070	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.00	0.00	0.00	0.00	0.00	0.00
	EOF-H203	Heater Treater H-203	0.098	0.005	0.082	0.012	0.0070	0.0070	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.43	0.02	0.36	0.05	0.03	0.03
	EOF-H204	Process Heater H-204	0.036	0.005	0.297	0.037	0.0070	0.0070	186.17	0.0002	0.03742	lb/MMBtu	PTO 7904.R10	0.90	0.13	7.43	0.93	0.18	0.18
Combustion: Flares	EOF-H205pi	Thermal Oxidizer H-205, Pilot	0.040	0.003	0.100	0.031	0.0140	0.0140	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.00	0.00	0.00	0.00	0.00	0.00
	EOF-H205p	Thermal Oxidizer H-205, Planned	0.040	0.003	0.100	0.031	0.0140	0.0140	164.12	0.0002	0.03041	lb/MMBtu	PTO 7904.R10	1.40	0.09	3.50	1.07	0.49	0.49
	EOF-H205u	Thermal Oxidizer H-205, Unplanned	0.040	0.003	0.100	1.470	0.0140	0.0140	164.12	0.0002	0.03041	lb/MMBtu	PTO 7904.R10	2.12	0.14	5.30	77.91	0.74	0.74
	EOF-H206pi	Thermal Oxidizer H-206, Pilot	0.070	0.003	0.370	0.031	0.0140	0.0140	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.02	0.00	0.13	0.01	0.00	0.00
	EOF-H206p	Thermal Oxidizer H-206, Planned	0.098	0.005	0.370	0.031	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	2.94	0.16	11.10	0.92	0.42	0.42
	EOF-H206u	Thermal Oxidizer H-206, Unplanned	0.098	0.005	0.370	1.470	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	4.70	0.26	17.76	70.56	0.67	0.67
	EOF-H207pi	Thermal Oxidizer H-207, Pilot	0.070	0.003	0.370	0.031	0.0140	0.0140	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.07	0.00	0.37	0.03	0.01	0.01
	EOF-H207p	Thermal Oxidizer H-207, Planned	0.098	0.005	0.370	0.031	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	2.94	0.16	11.10	0.92	0.42	0.42
	EOF-H207u	Thermal Oxidizer H-207, Unplanned	0.098	0.005	0.370	1.470	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	2.94	0.16	11.10	44.10	0.42	0.42
Oil Storage Tanks	EOF-T202	Oil Tank T-202	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/ROC	PTO 7904.R10	-	0.50	-	-	-	-
	EOF-T203	Oil Tank T-203	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/ROC	PTO 7904.R10	-	0.50	-	-	-	-
	EOF-T204	Oil Tank T-204	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/ROC	PTO 7904.R10	-	0.09	-	-	-	-
	EOF-T101	EB Tank T-101	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/ROC	PTO 7904.R10	-	0.05	-	-	-	-
Pigging Equipment	EOF-PROE	Receiver: oil emulsion	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.09	-	-	-	-
	EOF-PRU	Receiver: utility	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.09	-	-	-	-
	EOF-PRPG	Receiver: produced gas	-	0.0192	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.02	-	-	-	-
	EOF-PLSG	Launcher: seep gas	-	0.0192	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.02	-	-	-	-
	EOF-PLSG	Reciever: EOF to AAPL (at SYU)	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.70	-	-	-	-
	EOF-PLSG	Launcher: EOF to AAPL	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.40	-	-	-	-
Sump/Wastewater Tanks	EOF-S202	Sump Tank S-202	-	0.001	-	-	-	-	0.00	0.00	0.00	lb/ft2-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-TK201	Wash Tank TK-201	-	0.001	-	-	-	-	0.00	0.00	0.00	lb/ft2-day, lb CH4/ROC	PTO 7904.R10	-	0.03	-	-	-	-
	EOF-S203	Oil Sump S-203	-	0.018	-	-	-	-	0.00	0.00	0.00	lb/ft2-day, lb CH4/ROC	PTO 7904.R10	-	0.03	-	-	-	-
Loading Racks	EOF-RACK	Rack - LPG	-	0.0433	-	-	-	-	0.00	0.00	0.00	lb/load, lb CH4/ROC	SBCAPCD Spreads	-	0.04	-	-	-	-
	EOF-RACK	Rack - NGL	-	0.0282	-	-	-	-	0.00	0.00	0.00	lb/load, lb CH4/ROC	SBCAPCD Spreads	-	0.03	-	-	-	-
	EOF-RACK	Rack - Emulsion Breaker	-	1.079	-	-	-	-	0.00	0.00	0.00	lb/1000 gallons, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
Fugitive Cmpnnts, Gas/LL	EOF-FUGG-VALVES	Valves: Accessible	-	0.048	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	7.04	-	-	-	-
	EOF-FUGG-VALVESi	Valves: Inaccessible	-	0.08	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.01	-	-	-	-
	EOF-FUGG-VALVESU	Valves: Unsafe	-	0.402	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.10	-	-	-	-
	EOF-FUGG-CONN	Connectors: Accessible	-	0.003	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	2.43	-	-	-	-
	EOF-FUGG-CONNi	Connectors: Inaccessible	-	0.005	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.48	-	-	-	-
	EOF-FUGG-CONNu	Connectors: Unsafe	-	0.025	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.08	-	-	-	-
	EOF-FUGG-CS	Compressor Seal	-	0.2592	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.22	-	-	-	-
	EOF-FUGG-PRV	Press. Relief Valves: Accessible	-	0.0834	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.02	-	-	-	-
	EOF-FUGG-PRVi	Press. Relief Valves: Inaccessible	-	0.139	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGG-PRVu	Press. Relief Valves: Unsafe	-	0.696	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGG-PS	Pump Seal	-	0.3126	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.13	-	-	-	-
Fugitive Cmpnnts, Oil	EOF-FUGO-VALVES	Valves: Accessible	-	0.028	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.75	-	-	-	-
	EOF-FUGO-VALVES	Valves: Accessible Cat E	-	0.017	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.05	-	-	-	-
	EOF-FUGO-CONN	Connectors: Accessible	-	0.005	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.65	-	-	-	-
	EOF-FUGO-CONN	Connectors: Accessible Cat E	-	0.003	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.04	-	-	-	-
	EOF-FUGO-CONNu	Connectors: Unsafe	-	0.023	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGO-PRV	Press. Relief Valves: Accessible	-	0.115	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGO-PS	Pump Seal	-	0.086	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.03	-	-	-	-
Solvent/Coatings	EOF-SOL	Cleanin/Degreasing	-	789.68	-	-	-	-	0.00	0.00	0.00	g/l	2014 CVR	-	24.41	-	-	-	-
	EOF-SCOAT	Surface Coating	-	250.00	-	-	-	-	0.00	0.00	0.00	g/l	2014 CVR	-	23.37	-	-	-	-
Other Equipment	EOF-EFP	Emergency Fire Pump	4.09	0.33	0.87	0.53	0.044	0.043	163.05	1E-05	0.0066	lb/MMBtu	CVR 2014- K	4.55	0.37	0.97	0.59	0.05	0.05
	EOF-EG	Emergency Generator	4.09	0.33	0.87	0.53	0.290	0.287	163.05	1E-05	0.0066	lb/MMBtu	CVR 2014- K	11.21	0.90	2.39	1.45	0.80	0.79
TOTAL EOF Emissions																			

South Ellwood Air Emissions: Proposed Project
Platform Holly Facilities

			Emission Factors											Hourly Emissions, lbs/hr					
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**Sox**	**PM10**	**PM2.5**	**CO2**	**N2O**	**CH4**	**Units**		**NOx**	**ROC**	**CO**	**SOx**	**PM10**	**PM2.5**
Combustion: Flare	HOLLY-FLAREpi	Flare Planned - Pilot	0.068	0.086	0.37	0.002	0.02	0.02	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.01	0.02	0.08	0.00	0.00	0.00
	HOLLY-FLAREp	Flare Planned - Purge	0.068	0.086	0.37	0.037	0.02	0.02	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.16	0.20	0.85	0.09	0.05	0.05
	HOLLY-FLAREpu	Flare Planned - LP Purge	0.068	0.086	0.37	0.037	0.02	0.02	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.02	0.03	0.12	0.01	0.01	0.01
	HOLLY-FLAREi	Flare Planned - Intermittent	0.068	0.086	0.37	0.037	0.02	0.02	162.70	0.0002	0.02476	lb/MMBtu	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-FLAREu	Flare Unplanned	0.068	0.086	0.37	2.612	0.02	0.02	162.70	0.0002	0.02476	lb/MMBtu	2014 CVR	0.59	0.74	3.20	22.57	0.17	0.17
Fugitive Cmpnnts	HOLLY-FUGO	Oil, controlled	-	0.0009	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	2014 CVR	-	0.15	-	-	-	-
	HOLLY-FUGOu	Oil, unsafe	-	0.0044	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	2014 CVR	-	0.00	-	-	-	-
	HOLLY-FUGG	Gas, controlled	-	0.0147	-	-	-	-	1.06	0.00	1.35	lbs/clp-day, lb CH4/ROC	2014 CVR	-	8.62	-	-	-	-
	HOLLY-FUGGu	Gas, unsafe	-	0.0736	-	-	-	-	1.06	0.00	1.35	lbs/clp-day, lb CH4/ROC	2014 CVR	-	2.96	-	-	-	-
Pigging Equip.	HOLLY-PIGO	Oil Launcher	-	0.016	-	-	-	-	0.00	0.00	0.00	lb ROC/acf-ev.	2014 CVR	-	0.02	-	-	-	-
	HOLLY-PIGU	Utility Gas Launcher	-	0	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev.	2014 CVR	-	0.00	-	-	-	-
	HOLLY-PIGG	Gas Launcher	-	0	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev.	2014 CVR	-	0.00	-	-	-	-
Sumps/Tanks/Separators	HOLLY-T1	Oil surge tank (T-1)	-	0.0058	-	-	-	-	0.00	0.00	0.00	lb/ft2-day	2014 CVR	-	0.01	-	-	-	-
	HOLLY-T4	Overflow sump tank (T-4)	-	0.0058	-	-	-	-	0.00	0.00	0.00	lb/ft2-day	2014 CVR	-	0.03	-	-	-	-
Solvent/Coatings	HOLLY-SOL	Cleanin/Degreasing	-	-	-	-	-	-	0.00	0.00	0.00	actual numbers from CVR	2014 CVR	-	0.37	-	-	-	-
	HOLLY-SCOAT	Surface Coating	-	250.00	-	-	-	-	0.00	0.00	0.00	g/l	2014 CVR	-	191.10	-	-	-	-
Boom Boat	HOLLY-BB	Boom Boat	7.2	4.9	1357.34	0.27	48.10	48.100	517.70	0.00	0.02	g/bhp-hr	2014 CVR, permit	2.32	1.58	437.68	0.09	15.51	15.51
ICEs	HOLLY-EG	Backup Emergency Generator	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	3.19	0.26	0.69	0.30	0.22	0.22
	HOLLY-CRANE	Pedestal Crane	0.11	0.01	0.1	0.0002	0.0004	0.0004	22	0.000	0.001	lb/gal	2014 CVR	1.55	0.14	1.41	0.00	0.01	0.01
	HOLLY-DGEN1	Generator 1, NSCR, well maintenance	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.03	0.01	0.06	0.00	0.01	0.01
	HOLLY-DGEN2	Generator 2, NSCR, well maintenance	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.03	0.01	0.06	0.00	0.01	0.01
	HOLLY-DGEN3	Generator 3, NSCR, well maintenance	0.143	0.143	0.215	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.03	0.03	0.04	0.00	0.01	0.01
Supply Boat	HOLLY-SBmain	Supply Boat Main Engines	561	16.800	78.3	56.34	31.68	31.395	22296	0.002	0.904	lb/1000 gallons	2014 CVR	151.53	4.54	21.15	15.22	8.56	8.48
	HOLLY-SBgen	Supply Boat Generator Engines	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-SBBT	Supply Boat Bow Thruster	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
Crew Boat	HOLLY-CBM	Crew Boat Main Engines	561	44.500	99.7	56.34	31.68	31.395	22296	0.002	0.904	lb/1000 gallons	2014 CVR	45.83	3.64	8.15	4.60	2.59	2.56
	HOLLY-CBA	Crew Boat Auxillary Engines	600	48.980	129.26	56.34	40.49	40.126	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
Helicopters	HOLLY-HELIO	Heliocopter	1.58	0.68	3.82	0.15	5.98	4.19	396.71	0.00	0.02	lb/flight	2014 CVR, EPA	1.58	0.68	3.82	0.15	5.98	4.19
Total Platform Holly																			

Platform Holly Drilling Equipment

			Emission Factors											Peak Hourly Emissions, lbs/hr					
Equipment Category		**Description**	**NOx**	**ROC**	**CO**	**Sox**	**PM10**	**PM2.5**	**CO2**	**N2O**	**CH4**	**Units**		**NOx**	**ROC**	**CO**	**SOx**	**PM10**	**PM2.5**
ICEs	HOLLY-DCRANE	Crane	4.41	0.3	0.95	0.05	0.3	0.297	163.05	1E-05	0.0066	lb/MMBtu	2014 CVR	0.82	0.06	0.18	0.01	0.06	0.06
	HOLLY-DELU	Electric Line Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DSLU	Slick Line Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DHU	Hydraulic Unit for Casing Tongs	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DCTU	Coil Tubing Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DCU	Cement Unit	4.41	0.3	0.95	0.05	0.3	0.297	163.05	1E-05	0.0066	lb/MMBtu	2014 CVR	4.31	0.29	0.93	0.05	0.29	0.29
	HOLLY-DC	Compressor	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DNU	Nitrogen Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DWKP	Well Kill Pump ICE	4.41	0.3	0.95	0.05	0.3	0.297	163.05	1E-05	0.0066	lb/MMBtu	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DDGEN1	Generator 1, NSCR, well drilling	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.50	0.11	0.89	0.04	0.14	0.14
	HOLLY-DDGEN2	Generator 2, NSCR, well drilling	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.50	0.11	0.89	0.04	0.14	0.14
	HOLLY-DDGEN3	Generator 3, NSCR, well drilling	0.143	0.143	0.215	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.46	0.46	0.70	0.04	0.15	0.15
TOTAL Drilling														**6.60**	**1.04**	**3.58**	**0.18**	**0.78**	**0.77**

South Ellwood Air Emissions: Proposed Project
EOF Facilities

			Daily Emissions, lbs/day						Annual Emissions, tons/yr						MT/Year			
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**	**CO2**	**N2O**	**CH4**	**CO2e**
Combustion-External	EOF-H201	Heater Treater H-201	0.29	0.02	0.25	0.04	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.000	0.000	0
	EOF-H202	Heater Treater H-202	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0
	EOF-H203	Heater Treater H-203	1.96	0.10	1.64	0.24	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00	1.26	0.000	0.000	1
	EOF-H204	Process Heater H-204	17.50	2.43	144.34	17.98	3.40	3.40	3.11	0.43	25.62	3.19	0.60	0.60	14454	0.017	2.905	14,532
Combustion: Flares	EOF-H205pi	Thermal Oxidizer H-205, Pilot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	EOF-H205p	Thermal Oxidizer H-205, Planned	23.59	1.59	58.97	18.10	8.26	8.26	4.03	0.27	10.08	3.10	1.41	1.41	14895	0.020	2.760	14,970
	EOF-H205u	Thermal Oxidizer H-205, Unplanned	2.12	0.14	5.30	77.91	0.74	0.74	0.00	0.00	0.00	0.04	0.00	0.00	4	0.000	0.001	4
	EOF-H206pi	Thermal Oxidizer H-206, Pilot	0.57	0.02	3.02	0.25	0.11	0.11	0.10	0.00	0.55	0.05	0.02	0.02	188	0.000	0.031	189
	EOF-H206p	Thermal Oxidizer H-206, Planned	0.94	0.05	3.53	0.29	0.13	0.13	0.16	0.01	0.60	0.05	0.02	0.02	278	0.000	0.056	280
	EOF-H206u	Thermal Oxidizer H-206, Unplanned	4.70	0.26	17.76	70.56	0.67	0.67	0.00	0.00	0.01	0.04	0.00	0.00	4	0.000	0.001	4
	EOF-H207pi	Thermal Oxidizer H-207, Pilot	1.68	0.07	8.88	0.74	0.34	0.34	0.31	0.01	1.62	0.13	0.06	0.06	552	0.001	0.090	554
	EOF-H207p	Thermal Oxidizer H-207, Planned	2.51	0.14	9.49	0.79	0.36	0.36	0.43	0.02	1.62	0.13	0.06	0.06	747	0.001	0.152	752
	EOF-H207u	Thermal Oxidizer H-207, Unplanned	8.13	0.45	30.71	122.01	1.16	1.16	0.00	0.00	0.02	0.06	0.00	0.00	7	0.000	0.001	7
Oil Storage Tanks	EOF-T202	Oil Tank T-202	-	11.97	-	-	-	-	-	2.18	-	-	-	-	0	0.000	0.000	0
	EOF-T203	Oil Tank T-203	-	11.97	-	-	-	-	-	2.18	-	-	-	-	0	0.000	0.000	0
	EOF-T204	Oil Tank T-204	-	2.22	-	-	-	-	-	0.41	-	-	-	-	0	0.000	0.000	0
	EOF-T101	EB Tank T-101	-	1.15	-	-	-	-	-	0.21	-	-	-	-	0	0.000	0.000	0
Pigging Equipment	EOF-PROE	Receiver: oil emulsion	-	0.09	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.004	0
	EOF-PRU	Receiver: utility	-	0.09	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-PRPG	Receiver: produced gas	-	0.02	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.001	0
	EOF-PLSG	Launcher: seep gas	-	0.02	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-PLSG	Reciever: EOF to AAPL (at SYU)	-	0.70	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.005	0
	EOF-PLSG	Launcher: EOF to AAPL	-	0.40	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.003	0
Sump/Wastewater Tanks	EOF-S202	Sump Tank S-202	-	0.03	-	-	-	-	-	0.01	-	-	-	-	0	0.000	0.000	0
	EOF-TK201	Wash Tank TK-201	-	0.71	-	-	-	-	-	0.13	-	-	-	-	0	0.000	0.000	0
	EOF-S203	Oil Sump S-203	-	0.69	-	-	-	-	-	0.13	-	-	-	-	0	0.000	0.000	0
Loading Racks	EOF-RACK	Rack - LPG	-	0.09	-	-	-	-	-	0.02	-	-	-	-	0	0.000	0.000	0
	EOF-RACK	Rack - NGL	-	0.03	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-RACK	Rack - Emulsion Breaker	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
Fugitive Cmpnnts, Gas/LL	EOF-FUGG-VALVES	Valves: Accessible	-	168.91	-	-	-	-	-	30.83	-	-	-	-	19	0.000	28.299	727
	EOF-FUGG-VALVESi	Valves: Inaccessible	-	0.32	-	-	-	-	-	0.06	-	-	-	-	0	0.000	0.054	1
	EOF-FUGG-VALVESU	Valves: Unsafe	-	2.41	-	-	-	-	-	0.44	-	-	-	-	0	0.000	0.404	10
	EOF-FUGG-CONN	Connectors: Accessible	-	58.22	-	-	-	-	-	10.62	-	-	-	-	7	0.000	9.754	250
	EOF-FUGG-CONNi	Connectors: Inaccessible	-	11.64	-	-	-	-	-	2.12	-	-	-	-	1	0.000	1.949	50
	EOF-FUGG-CONNu	Connectors: Unsafe	-	1.95	-	-	-	-	-	0.36	-	-	-	-	0	0.000	0.327	8
	EOF-FUGG-CS	Compressor Seal	-	5.18	-	-	-	-	-	0.95	-	-	-	-	1	0.000	0.869	22
	EOF-FUGG-PRV	Press. Relief Valves: Accessible	-	0.58	-	-	-	-	-	0.11	-	-	-	-	0	0.000	0.098	3
	EOF-FUGG-PRVi	Press. Relief Valves: Inaccessible	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGG-PRVu	Press. Relief Valves: Unsafe	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGG-PS	Pump Seal	-	3.13	-	-	-	-	-	0.57	-	-	-	-	0	0.000	0.524	13
Fugitive Cmpnnts, Oil	EOF-FUGO-VALVES	Valves: Accessible	-	18.12	-	-	-	-	-	3.31	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-VALVES	Valves: Accessible Cat E	-	1.24	-	-	-	-	-	0.23	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-CONN	Connectors: Accessible	-	15.60	-	-	-	-	-	2.85	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-CONN	Connectors: Accessible Cat E	-	0.94	-	-	-	-	-	0.17	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-CONNu	Connectors: Unsafe	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-PRV	Press. Relief Valves: Accessible	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-PS	Pump Seal	-	0.60	-	-	-	-	-	0.11	-	-	-	-	0	0.000	0.000	0
Solvent/Coatings	EOF-SOL	Cleanin/Degreasing	-	24.41	-	-	-	-	-	0.07	-	-	-		0.00	0.000	0.000	0
	EOF-SCOAT	Surface Coating	-	23.37	-	-	-	-	-	0.03	-	-	-		0.00	0.000	0.000	0
Other Equipment	EOF-EFP	Emergency Fire Pump	2.27	0.18	0.48	0.29	0.02	0.02	0.06	0.00	0.01	0.01	0.00	0.00	2	0.000	0.000	2
	EOF-EG	Emergency Generator	11.21	0.90	2.39	1.45	0.80	0.79	0.07	0.01	0.01	0.01	0.00	0.00	2	0.000	0.000	2
TOTAL EOF Emissions			**62.53**	**372.30**	**232.99**	**40.18**	**13.58**	**13.57**	**8.28**	**58.85**	**40.2**	**6.80**	**2.19**	**2.19**	**31,165**	**0.04**	**48.29**	**32,384**

South Ellwood Air Emissions: Proposed Project
Platform Holly Facilities

			Daily Emissions, lbs/day						Annual Emissions, tons/yr						MT/Yr			
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**CO2**	**N2O**	**CH4**	**CO2e**
Combustion: Flare	HOLLY-FLAREpi	Flare Planned - Pilot	0.18	0.23	0.98	0.01	0.05	0.05	0.03	0.04	0.18	0.00	0.01	0.01	61	0.000	0.010	61
	HOLLY-FLAREp	Flare Planned - Purge	0.60	0.76	3.28	0.33	0.18	0.18	0.11	0.14	0.60	0.06	0.03	0.03	204	0.000	0.033	205
	HOLLY-FLAREpu	Flare Planned - LP Purge	0.04	0.05	0.21	0.02	0.01	0.01	0.01	0.01	0.04	0.00	0.00	0.00	13	0.000	0.002	13
	HOLLY-FLAREi	Flare Planned - Intermittent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-FLAREu	Flare Unplanned	0.59	0.74	3.20	22.57	0.17	0.17	0.00	0.00	0.00	0.01	0.00	0.00	1	0.000	0.000	1
Fugitive Cmpnnts	HOLLY-FUGO	Oil, controlled	-	3.59	-	-	-	-	-	0.66	-	-	-	-	0	0.000	0.000	0
	HOLLY-FUGOu	Oil, unsafe	-	0.06	-	-	-	-	-	0.01	-	-	-	-	0	0.000	0.000	0
	HOLLY-FUGG	Gas, controlled	-	206.78	-	-	-	-	-	37.74	-	-	-	-	36	0.000	45.852	1,182
	HOLLY-FUGGu	Gas, unsafe	-	70.95	-	-	-	-	-	12.95	-	-	-	-	12	0.000	15.732	406
Pigging Equip.	HOLLY-PIGO	Oil Launcher	-	0.02	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	HOLLY-PIGU	Utility Gas Launcher	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	HOLLY-PIGG	Gas Launcher	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
													-	-				
Sumps/Tanks/Separators	HOLLY-T1	Oil surge tank (T-1)	-	0.26	-	-	-	-	-	0.05	-	-	-	-	0	0.000	0.000	0
	HOLLY-T4	Overflow sump tank (T-4)	-	0.66	-	-	-	-	-	0.12	-	-	-	-	0	0.000	0.000	0
Solvent/Coatings	HOLLY-SOL	Cleanin/Degreasing	-	3.04	-	-	-	-	-	0.34	-	-	-	-	0	0.000	0.000	0
	HOLLY-SCOAT	Surface Coating	-	191.10	-	-	-	-	-	0.24	-	-	-	-	0	0.000	0.000	0
Boom Boat	HOLLY-BB	Boom Boat	3.48	2.37	656.52	0.13	23.26	23.26	0.00	0.00	0.33	0.00	0.01	0.01	0	0.000	0.000	0
ICEs	HOLLY-EG	Backup Emergency Generator	3.19	0.26	0.69	0.30	0.22	0.22	0.03	0.00	0.01	0.00	0.00	0.00	1	0.000	0.000	1
	HOLLY-CRANE	Pedestal Crane	9.10	0.83	8.27	0.02	0.03	0.03	0.46	0.04	0.42	0.00	0.00	0.00	93	0.000	0.004	93
	HOLLY-DGEN1	Generator 1, NSCR, well maintenance	0.76	0.17	1.33	0.06	0.21	0.21	0.14	0.03	0.24	0.01	0.04	0.04	116	0.000	0.019	117
	HOLLY-DGEN2	Generator 2, NSCR, well maintenance	0.76	0.17	1.33	0.06	0.21	0.21	0.14	0.03	0.24	0.01	0.04	0.04	116	0.000	0.019	117
	HOLLY-DGEN3	Generator 3, NSCR, well maintenance	0.69	0.69	1.04	0.06	0.22	0.22	0.13	0.13	0.19	0.01	0.04	0.04	124	0.000	0.020	125
Supply Boat	HOLLY-SBmain	Supply Boat Main Engines	539.12	16.14	75.25	54.14	30.44	30.17	34.82	1.04	4.86	3.50	1.97	1.95	1,245	0.000	0.051	1,247
	HOLLY-SBgen	Supply Boat Generator Engines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-SBBT	Supply Boat Bow Thruster	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
Crew Boat	HOLLY-CBM	Crew Boat Main Engines	90.0	7.1	16.0	9.0	5.1	5.0	15.12	1.20	2.69	1.52	0.85	0.85	601	0.000	0.024	602
	HOLLY-CBA	Crew Boat Auxillary Engines	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
Helicopters	HOLLY-HELIO	Heliocopter	1.58	0.68	3.82	0.15	5.98	4.19	0.00	0.00	0.00	0.00	0.01	0.00	0	0.000	0.000	0
Total Platform Holly			**650.08**	**506.70**	**771.90**	**86.88**	**66.09**	**63.97**	**50.984**	**54.766**	**9.795**	**5.128**	**3.003**	**2.976**	**2,624**	**0.001**	**61.8**	**4,168**

Platform Holly Drilling Equipment

			Peak Daily Emissions, lbs/day						Annual Emissions, tons/yr						MT/Yr			
Equipment Category		**Description**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**CO2**	**N2O**	**CH4**	**CO2e**
ICEs	HOLLY-DCRANE	Crane	6.54	0.45	1.41	0.07	0.45	0.44	0.65	0.04	0.14	0.01	0.04	0.04	22	0.000	0.001	22
	HOLLY-DELU	Electric Line Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DSLU	Slick Line Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DHU	Hydraulic Unit for Casing Tongs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DCTU	Coil Tubing Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DCU	Cement Unit	34.51	2.35	7.43	0.39	2.35	2.33	0.42	0.03	0.09	0.00	0.03	0.03	14	0.000	0.001	14
	HOLLY-DC	Compressor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DNU	Nitrogen Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DWKP	Well Kill Pump ICE	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.00	0.00	2	0.000	0.000	2
	HOLLY-DDGEN1	Generator 1, NSCR, well drilling	12.10	2.70	21.28	0.95	3.35	3.35	1.58	0.35	2.79	0.12	0.44	0.44	1,335	0.0021	0.2166	1,341
	HOLLY-DDGEN2	Generator 2, NSCR, well drilling	12.10	2.70	21.28	0.95	3.35	3.35	1.58	0.35	2.79	0.12	0.44	0.44	1,335	0.0021	0.2166	1,341
	HOLLY-DDGEN3	Generator 3, NSCR, well drilling	11.12	11.12	16.72	1.01	3.58	3.58	1.46	1.46	2.19	0.13	0.47	0.47	1,424	0.0022	0.2311	1,431
TOTAL Drilling			**76.37**	**19.30**	**68.1**	**3.37**	**13.07**	**13.05**	**5.76**	**2.24**	**8.01**	**0.39**	**1.42**	**1.42**	**4,131**	**0.006**	**0.666**	**4,150**

Offsite Emissions

Existing EOF and Holly Offsite Vehicles (from EOF or Ellwood Pier)

	Parameters									Emission Factors, lbs/mile									Peak Day Emissions, lbs/day						Annual Emissions, Tons						Annual Emissions, MT			
Source	Vehicle Type	Include in Peak day?	Number of Vehicles per Day	Daily Trips (one way)	No. of days per year**	Distance One Way (miles)	Avg. Speed (mph)	Time of Trip (min)	Miles per year	NOx	ROC	CO	SO2	PM10	PM2.5	CO2	N2O	CH4	NOx	ROC	CO	SO2	PM10	PM2.5	NOx	ROC	CO	SO2	PM10	PM2.5	CO2	N2O	CH4	CO2e
Workers Commuting - EOF Personnel	Gasoline	1	20	40	365	12.3	35	21	179,580	0.000320	0.000086	0.003193	0.000007	0.000004	0.000004	0.655470	0.000000	0.000034	0.158	0.042	1.571	0.003	0.002	0.002	0.029	0.008	0.287	0.001	0.000	0.000	53	0.00	0.00	53
Workers Commuting - Holly Personnel	Gasoline	1	10	20	365	12.3	35	21	89,790	0.000320	0.000086	0.003193	0.000007	0.000004	0.000004	0.655470	0.000000	0.000034	0.079	0.021	0.785	0.002	0.001	0.001	0.014	0.004	0.143	0.000	0.000	0.000	26	0.00	0.00	27
Trucks - EOF misc (non-sulfur, non-LPG/NGL)	Diesel	1	6.38	13	365	12.3	35	21	57,244	0.022815	0.001106	0.004136	0.000036	0.000411	0.000393	3.928293	0.000000	0.000033	3.578	0.173	0.649	0.006	0.064	0.062	0.653	0.032	0.118	0.001	0.012	0.011	101	0.00	0.00	101
Trucks - EOF sulfur	Diesel	1	0.28	1	365	12.3	35	21	2,534	0.022815	0.001106	0.004136	0.000036	0.000411	0.000393	3.928293	0.000000	0.000033	0.158	0.008	0.029	0.000	0.003	0.003	0.029	0.001	0.005	0.000	0.001	0.000	4	0.00	0.00	4
Trucks - EOF LPG/NGL within SBC	Diesel	1	0.62	1	365	28	55	31	12,768	0.020354	0.000679	0.002894	0.000000	0.000498	0.000476	3.434222	0.000000	0.000033	0.712	0.024	0.101	0.000	0.017	0.017	0.130	0.004	0.018	0.000	0.003	0.003	20	0.00	0.00	20
Trucks - Holly misc (non drilling)	Diesel	1	1	2	50	12.3	35	21	1,230	0.022815	0.001106	0.004136	0.000036	0.000411	0.000393	3.928293	0.000000	0.000033	0.561	0.027	0.102	0.001	0.010	0.010	0.014	0.001	0.003	0.000	0.000	0.000	2	0.00	0.00	2
Total			***38***																***5.2***	***0.3***	***3.2***	***0.0***	***0.1***	***0.1***	***0.87***	***0.05***	***0.57***	***0.00***	***0.02***	***0.02***	***207***	***0.00***	***0.01***	***207***
Trucks - EOF LPG/NGL outside SBC	Diesel	1	0.62	1	365	127	55	139	57,912	0.020354	0.000679	0.002894	0.000000	0.000498	0.000476	3.434222	0.000000	0.000033	3.229	0.108	0.459	0.000	0.079	0.076	0.589	0.020	0.084	0.000	0.014	0.014	89	0.00	0.00	90

based on a total of 7 trucks per day LPG/NGL + misc as per Applicant

Project EOF and Holly Offsite Vehicles (from EOF or Ellwood Pier)

	Parameters									Emission Factors, lbs/mile									Peak Day Emissions, lbs/day						Annual Emissions, Tons						Annual Emissions, MT			
Source	Vehicle Type	Include in Peak day?	Number of Vehicles per Day	Daily Trips (one way)	No. of days per year**	Distance One Way (miles)	Speed (mph)	Time of Trip (min)	Miles per year	NOx	ROC	CO	SO2	PM10	PM2.5	CO2	N2O	CH4	NOx	ROC	CO	SO2	PM10	PM2.5	NOx	ROC	CO	SO2	PM10	PM2.5	CO2	N2O	CH4	CO2e
Workers Commuting - EOF Personnel	Gasoline	1	20	40	365	12.3	35	21	179,580	0.000320	0.000086	0.003193	0.000007	0.000004	0.000004	0.655470	0.000000	0.000034	0.158	0.042	1.571	0.003	0.002	0.002	0.029	0.008	0.287	0.001	0.000	0.000	53	0.00	0.00	53
Workers Commuting - Holly Personnel	Gasoline	1	10	20	365	12.3	35	21	89,790	0.000320	0.000086	0.003193	0.000007	0.000004	0.000004	0.655470	0.000000	0.000034	0.079	0.021	0.785	0.002	0.001	0.001	0.014	0.004	0.143	0.000	0.000	0.000	26	0.00	0.00	27
Trucks - EOF misc (non-sulfur, non-LPG/NGL)	Diesel	1	6.38	13	365	12.3	35	21	57,244	0.022815	0.001106	0.004136	0.000036	0.000411	0.000393	3.928293	0.000000	0.000033	3.578	0.173	0.649	0.006	0.064	0.062	0.653	0.032	0.118	0.001	0.012	0.011	101	0.00	0.00	101
Trucks - EOF sulfur	Diesel	1	1.99	4	365	12.3	35	21	17,860	0.022815	0.001106	0.004136	0.000036	0.000411	0.000393	3.928293	0.000000	0.000033	1.116	0.054	0.202	0.002	0.020	0.019	0.204	0.010	0.037	0.000	0.004	0.004	32	0.00	0.00	32
Trucks - EOF LPG/NGL within SBC	Diesel	1	1.95	4	365	28	55	31	39,917	0.020354	0.000679	0.002894	0.000000	0.000498	0.000476	3.434222	0.000000	0.000033	2.226	0.074	0.316	0.000	0.054	0.052	0.406	0.014	0.058	0.000	0.010	0.010	62	0.00	0.00	62
Trucks - Holly misc (non drilling)	Diesel	1	1	2	50	12.3	35	21	1,230	0.022815	0.001106	0.004136	0.000036	0.000411	0.000393	3.928293	0.000000	0.000033	0.561	0.027	0.102	0.001	0.010	0.010	0.014	0.001	0.003	0.000	0.000	0.000	2	0.00	0.00	2
Total			***41***																***7.7***	***0.4***	***3.6***	***0.0***	***0.2***	***0.1***	***1.32***	***0.07***	***0.65***	***0.00***	***0.03***	***0.03***	***276***	***0.00***	***0.01***	***276***
Trucks - EOF LPG/NGL outside SBC	Diesel	1	1.95	4	365	127	55	139	181,054	0.020354	0.000679	0.002894	0.000000	0.000498	0.000476	3.434222	0.000000	0.000033	10.096	0.337	1.436	0.000	0.247	0.236	1.843	0.061	0.262	0.000	0.045	0.043	280	0.00	0.00	280

Existing Project Offsite Mobile Emission Sources Used During Drilling (vehicles that arrive at the Ellwood or Casitas Pier to load/offload crew/supply boats going to Holly)

	Parameters									Emission Factors, lbs/mile									Peak Day Emissions, lbs/day						Annual Emissions, Tons						Annual Emissions, MT			
Source	Vehicle Type	Include in Peak day?	Number of Vehicles per Day	Daily Trips (one way)	No. of days per year	Distance One Way (miles)	Speed (mph)	Time of Trip (min)	Miles per year	NOx	ROC	CO	SO2	PM10	PM2.5	CO2	N2O	CH4	NOx	ROC	CO	SO2	PM10	PM2.5	NOx	ROC	CO	SO2	PM10	PM2.5	CO2	N2O	CH4	CO2e
Workers Commuting - Drilling Personnel (Ellwood)	Gasoline	1	36	72	135	12.3	35	21	119,556	0.000320	0.000086	0.003193	0.000007	0.000004	0.000004	0.655470	0.000000	0.000034	0.284	0.076	2.828	0.006	0.004	0.003	0.019	0.005	0.191	0.000	0.000	0.000	35	0.00	0.00	35
Workers Commuting - Other Drilling Personnel (Ellwood)	Gasoline	1	7.2	14	68	12.3	35	21	11,956	0.000320	0.000086	0.003193	0.000007	0.000004	0.000004	0.655470	0.000000	0.000034	0.057	0.015	0.566	0.001	0.001	0.001	0.002	0.001	0.019	0.000	0.000	0.000	4	0.00	0.00	4
Equipment/Supplies Delivery or Waste Removal (Casitas)	Diesel	1	12	24	135	12.3	35	21	39,852	0.022815	0.001106	0.004136	0.000036	0.000411	0.000393	3.928293	0.000000	0.000033	6.735	0.327	1.221	0.011	0.121	0.116	0.455	0.022	0.082	0.001	0.008	0.008	70	0.00	0.00	70
Total																			***7.1***	***0.4***	***4.6***	***0.0***	***0.1***	***0.1***	***0.48***	***0.03***	***0.29***	***0.00***	***0.01***	***0.01***	***109***	***0.00***	***0.00***	***109***

Existing and Proposed Project Offsite Mobile Emission Sources Used During Drilling (vehicles that arrive at the Ellwood or Casitas Pier to load/offload crew/supply boats going to Holly)

	Parameters									Emission Factors, lbs/mile									Peak Day Emissions, lbs/day						Annual Emissions, Tons						Annual Emissions, MT			
Source	Vehicle Type	Include in Peak day?	Number of Vehicles per Day	Daily Trips (one way)	No. of days per year	Distance One Way (miles)	Speed (mph)	Time of Trip (min)	Miles per year	NOx	ROC	CO	SO2	PM10	PM2.5	CO2	N2O	CH4	NOx	ROC	CO	SO2	PM10	PM2.5	NOx	ROC	CO	SO2	PM10	PM2.5	CO2	N2O	CH4	CO2e
Workers Commuting - Drilling Personnel (Ellwood)	Gasoline	1	36	72	262	12.3	35	21	232,027	0.000320	0.000086	0.003193	0.000007	0.000004	0.000004	0.655470	0.000000	0.000034	0.284	0.076	2.828	0.006	0.004	0.003	0.037	0.010	0.370	0.001	0.000	0.000	68	0.00	0.00	69
Workers Commuting - Other Drilling Personnel (Ellwood)	Gasoline	1	7.2	14	131	12.3	35	21	23,203	0.000320	0.000086	0.003193	0.000007	0.000004	0.000004	0.655470	0.000000	0.000034	0.057	0.015	0.566	0.001	0.001	0.001	0.004	0.001	0.037	0.000	0.000	0.000	7	0.00	0.00	7
Equipment/Supplies Delivery or Waste Removal (Casitas)	Diesel	1	12	24	262	12.3	35	21	77,342	0.022815	0.001106	0.004136	0.000036	0.000411	0.000393	3.928293	0.000000	0.000033	6.735	0.327	1.221	0.011	0.121	0.116	0.882	0.043	0.160	0.001	0.016	0.015	137	0.00	0.00	137
Total																			***7.1***	***0.4***	***4.6***	***0.0***	***0.1***	***0.1***	***0.92***	***0.05***	***0.57***	***0.00***	***0.02***	***0.02***	***212***	***0.00***	***0.01***	***212***

Emissions calculations based on EMFAC2014
Baseline sulfir truck trips of 130
CH4 and Sox emissions from CalEEMod
N2O from CalEEMod and MRR
Drilling pesonnell 18 per shift, 2 shifts/day
Additional drilling personnell (inspection, etc) estimated as 20% of shift
Days per year based on proposed project peak year of drilling
Estimated 3 trucks per supply boat, 4 supply boats per day max
Used sulfur trips in 2014 and assocaited gas production levels in 2014 to estimate project sulfur truck trips nased on project gas throughout. Assumes H2S cocentrations are the same.
Using sulfur concentration of 22% (as opposed to 26% in 2014) from 5 year average for the project, which increases truck trips by 18% to 726 annual trips

Proposed Project Offsite Mobile Emission Sources Used During Construction (Ventura and Santa Barbara Counties)

	Parameters									Emission Factors, lbs/mile									Peak Day Emissions, lbs/day						Annual Emissions, Tons						Annual Emissions, MT			
Source	Vehicle Type	Include in Peak day?	Number of Vehicles per Day	Daily Trips (one way)	No. of days per year**	Distance One Way (miles)	Speed (mph)	Time of Trip (min)	Miles per year	NOx	ROC	CO	SO2	PM10	PM2.5	CO2	N2O	CH4	NOx	ROC	CO	SO2	PM10	PM2.5	NOx	ROC	CO	SO2	PM10	PM2.5	CO2	N2O	CH4	CO2e
Workers Commuting - Personnel - VC (Huenene)	Gasoline	1	5	10	30	16.8	35	29	5,040	0.000320	0.000086	0.003193	0.000007	0.000004	0.000004	0.655470	0.000000	0.000034	0.054	0.014	0.536	0.001	0.001	0.001	0.001	0.000	0.008	0.000	0.000	0.000	1	0.00	0.00	1
Equipment/Supplies Delivery - VC (Huenene)	Diesel	1	6	12	3	16.8	35	29	605	0.022815	0.001106	0.004136	0.000036	0.000411	0.000393	3.928293	0.000000	0.000033	4.600	0.223	0.834	0.007	0.083	0.079	0.007	0.000	0.001	0.000	0.000	0.000	1	0.00	0.00	1
Workers Commuting - Personnel - SBC (Casitas)	Gasoline	1	5	10	30	16.8	35	29	5,040	0.000320	0.000086	0.003193	0.000007	0.000004	0.000004	0.655470	0.000000	0.000034	0.054	0.014	0.536	0.001	0.001	0.001	0.001	0.000	0.008	0.000	0.000	0.000	1	0.00	0.00	1
Equipment/Supplies Delivery - SBC (Casitas)	Diesel	1	12	24	3	16.8	35	29	1,210	0.022815	0.001106	0.004136	0.000036	0.000411	0.000393	3.928293	0.000000	0.000033	9.199	0.446	1.668	0.014	0.166	0.158	0.014	0.001	0.003	0.000	0.000	0.000	2	0.00	0.00	2
Total																			***13.9***	***0.7***	***3.6***	***0.0***	***0.2***	***0.2***	***0.02***	***0.00***	***0.02***	***0.00***	***0.00***	***0.00***	***6.2***	***0.0***	***0.0***	***6.2***

Assumes 3 truck trips per supply boat trip on a peak day.
4 supply boat trips on a peak day out of Casitas

Construction Emissions

								Operating Schedule							Emission Factors											Hourly Emissions, lbs/hr						Daily Emissions, lbs/day						Annual Emissions, tons/yr						MT/Year			
Equipment Cate	Description	Fuel or Service	Parameter	Size	Units	Capacity	Units	Actual Annual Use	Units	Peak Day Use	Units	Peak Day Hours	Yearly Days	Load	NOx	ROC	CO	Sox	PM10	PM2.5	CO2	N2O	CH4	Units	EF Source	NOx	ROC	CO	SOx	PM_{10}	$PM_{2.5}$	NOx	ROC	CO	SOx	PM_{10}	$PM_{2.5}$	NOx	ROC	CO	SOx	PM_{10}	$PM_{2.5}$	CO2	N2O	CH4	CO2e
ICEs	Generator	D2	-	373.00	bhp	21.2	gal/hr	10.20	kgal/yr	0.170	kgal/day	8.0	60	0.05	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	12.74	1.04	2.75	1.20	0.90	0.89	101.95	8.32	21.96	9.57	7.17	7.10	3.06	0.25	0.66	0.29	0.22	0.21	114	0.000	0.005	114
	Crane	D2	-	250.00	bhp	14.1	gal/hr	6.77	kgal/yr	0.113	kgal/day	8.0	60	0.34	0.11	0.01	0.1	0.0002	0.0004	0.000	22	0.000	0.001	lb/gal	2014 CVR	1.55	0.14	1.41	0.00	0.01	0.01	12.41	1.13	11.28	0.02	0.05	0.04	0.37	0.03	0.34	0.00	0.00	0.00	75	0.000	0.003	76
Supply Boat	Supply Boat Main Engines	D2	-	4920.00	bhp-total	270.10	gal/hr	6.6	kGal/yr	328.7	gal/day	1.2	20	0.65	561	16.800	78.3	56.34	31.68	31.395	22296	0.002	0.904	lb/1000 gallons	2014 CVR	151.53	4.54	21.15	15.22	8.56	8.48	184.40	5.52	25.74	18.52	10.41	10.32	1.84	0.06	0.26	0.19	0.10	0.10	66	0.000	0.003	66
	Supply Boat Generator Engines	D2	-	530.00	bhp-total	29.10	gal/hr	0.0	kGal/yr	0	gal/day	0.0	20	0.50	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	Supply Boat Bow Thruster	D2	-	530.00	bhp-total	29.10	gal/hr	0.0	kGal/yr	0	gal/day	0.0	20	0.50	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
Barge Boat	Barge Boat Main Engines-SBC	D2	-	5000.00	bhp-total	300.00	gal/hr	1.8	kGal/yr	179.1	gal/day	0.6	10	0.65	561	16.800	78.3	56.34	31.68	31.395	22296	0.002	0.904	lb/1000 gallons	2014 CVR	168.30	5.04	23.49	16.90	9.50	9.42	100.46	3.01	14.02	10.09	5.67	5.62	0.50	0.02	0.07	0.05	0.03	0.03	18	0.000	0.001	18
	Barge Boat Main Engines-VC	D2	-	5000.00	bhp-total	300.00	gal/hr	1.7	kGal/yr	170.9	gal/day	0.6	10	0.65	561	16.800	78.3	56.34	31.68	31.395	22296	0.002	0.904	lb/1000 gallons	2014 CVR	168.30	5.04	23.49	16.90	9.50	9.42	95.89	2.87	13.38	9.63	5.42	5.37	0.48	0.01	0.07	0.05	0.03	0.03	17	0.000	0.001	17
Total																																**495.11**	**20.85**	**86.39**	**47.83**	**28.71**	**28.46**	**6.26**	**0.37**	**1.39**	**0.57**	**0.38**	**0.37**	**290**	**0.000**	**0.012**	**290**

Notes:
Supply boat fuel use is the 2014 average per day of use.
Barge boat size and fuel use estimated. Fuel use within different counties based on distance within Counties
Diesel DPM PM2.5/PM10 ratio, SCAQMD CEIDARS of 0.991

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
Chem bulk tanks		1120	1120	1	1330207	Xylenes	1	8.50E-03	3.36E-03	8.50E-03	3.36E-03	8.50E-03	3.36E-03	Taken directly from SBCAPCD Spreadsheets
		1120	1120	1	67630	Isopropyl Alcoh	1	1.10E-01	3.38E-02	1.10E-01	3.38E-02	1.10E-01	3.38E-02	
		1120	1120	1	95636	1,2,4-Trimethylbenzene	1	1.92E-02	1.50E-02	1.92E-02	1.50E-02	1.92E-02	1.50E-02	
		1120	1120	1	123911	1,4-Dioxane	1	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	1.01E-03	
		1120	1120	1	67561	Methanol	1	5.08-01	1.43E-01	5.08E-01	1.43E-01	5.08E-01	1.43E-01	
		1120	1120	1	108883	Toluene	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
		1120	1120	1	100414	Ethyl benzene	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Fugitive Zone 1a	3	1121	1121	1	71432	Benzene	1	1.26E+00	2.68E-04	7.53E-01	1.61E-04	7.53E-01	1.61E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	3	1121	1121	1	108883	Toluene	1	5.42E-01	6.19E-05	3.25E-01	3.71E-05	3.25E-01	3.71E-05	
	3	1121	1121	1	100414	Ethyl benzene	1	2.16E-01	2.47E-05	1.30E-01	1.48E-05	1.30E-01	1.48E-05	
	3	1121	1121	1	1330207	Xylenes	1	4.32E-01	4.94E-05	2.59E-01	2.96E-05	2.59E-01	2.96E-05	
	3	1121	1121	1	110543	Hexane	1	1.27E+00	1.45E-04	7.64E-01	8.72E-05	7.64E-01	8.72E-05	
	3	1121	1121	1	7783064	Hydrogen sulfide	1	2.10E-03	4.01E-07	1.26E-03	2.41E-07	1.26E-03	2.41E-07	
	3	1121	1121	1	106467	p-Dichlorobenzene {1,4-Dicl	1	1.46E-01	1.67E-05	8.78E-02	1.00E-05	8.78E-02	1.00E-05	
	3	1121	1121	1	67561	Methanol	1	9.03E+00	1.03E-03	5.42E+00	6.19E-04	5.42E+00	6.19E-04	
Fugitive Zone 1b	4	1122	1122	1	71432	Benzene	1	1.26E+00	2.68E-04	7.53E-01	1.61E-04	7.53E-01	1.61E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	4	1122	1122	1	108883	Toluene	1	5.42E-01	6.19E-05	3.25E-01	3.71E-05	3.25E-01	3.71E-05	
	4	1122	1122	1	100414	Ethyl benzene	1	2.16E-01	2.47E-05	1.30E-01	1.48E-05	1.30E-01	1.48E-05	
	4	1122	1122	1	1330207	Xylenes	1	4.32E-01	4.94E-05	2.59E-01	2.96E-05	2.59E-01	2.96E-05	
	4	1122	1122	1	110543	Hexane	1	1.27E+00	1.45E-04	7.64E-01	8.72E-05	7.64E-01	8.72E-05	
	4	1122	1122	1	7783064	Hydrogen sulfide	1	2.10E-03	4.01E-07	1.26E-03	2.41E-07	1.26E-03	2.41E-07	
	4	1122	1122	1	106467	p-Dichlorobenzene {1,4-Dicl	1	1.46E-01	1.67E-05	8.78E-02	1.00E-05	8.78E-02	1.00E-05	
	4	1122	1122	1	67561	Methanol	1	9.03E+00	1.03E-03	5.42E+00	6.19E-04	5.42E+00	6.19E-04	
Fugitive Zone 1c	5	1123	1123	1	71432	Benzene	1	1.26E+00	2.68E-04	7.53E-01	1.61E-04	7.53E-01	1.61E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	5	1123	1123	1	108883	Toluene	1	5.42E-01	6.19E-05	3.25E-01	3.71E-05	3.25E-01	3.71E-05	
	5	1123	1123	1	100414	Ethyl benzene	1	2.16E-01	2.47E-05	1.30E-01	1.48E-05	1.30E-01	1.48E-05	
	5	1123	1123	1	1330207	Xylenes	1	4.32E-01	4.94E-05	2.59E-01	2.96E-05	2.59E-01	2.96E-05	
	5	1123	1123	1	110543	Hexane	1	1.27E+00	1.45E-04	7.64E-01	8.72E-05	7.64E-01	8.72E-05	
	5	1123	1123	1	7783064	Hydrogen sulfide	1	2.10E-03	4.01E-07	1.26E-03	2.41E-07	1.26E-03	2.41E-07	
	5	1123	1123	1	106467	p-Dichlorobenzene {1,4-Dicl	1	1.46E-01	1.67E-05	8.78E-02	1.00E-05	8.78E-02	1.00E-05	
	5	1123	1123	1	67561	Methanol	1	9.03E+00	1.03E-03	5.42E+00	6.19E-04	5.42E+00	6.19E-04	
Fugitive Zone 2a	6	1124	1124	1	71432	Benzene	1	3.24E-01	5.77E-05	1.94E-01	3.46E-05	1.94E-01	3.46E-05	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	6	1124	1124	1	108883	Toluene	1	2.28E-01	2.60E-05	1.37E-01	1.56E-05	1.37E-01	1.56E-05	
	6	1124	1124	1	100414	Ethyl benzene	1	1.93E-01	2.21E-05	1.16E-01	1.32E-05	1.16E-01	1.32E-05	
	6	1124	1124	1	1330207	Xylenes	1	4.32E-01	4.93E-05	2.59E-01	2.96E-05	2.59E-01	2.96E-05	
	6	1124	1124	1	110543	Hexane	1	1.07E+00	1.22E-04	6.41E-01	7.32E-05	6.41E-01	7.32E-05	
	6	1124	1124	1	7783064	Hydrogen sulfide	1	1.33E-03	2.34E-07	8.00E-04	1.40E-07	8.00E-04	1.40E-07	
	6	1124	1124	1	106467	p-Dichlorobenzene {1,4-Dicl	1	1.45E-01	1.66E-05	8.72E-02	9.96E-06	8.72E-02	9.96E-06	
	6	1124	1124	1	67561	Methanol	1	8.97E+00	1.02E-03	5.38E+00	6.14E-04	5.38E+00	6.14E-04	
Fugitive Zone 2b	7	1125	1125	1	71432	Benzene	1	3.24E-01	5.77E-05	1.94E-01	3.46E-05	1.94E-01	3.46E-05	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	7	1125	1125	1	108883	Toluene	1	2.28E-01	2.60E-05	1.37E-01	1.56E-05	1.37E-01	1.56E-05	
	7	1125	1125	1	100414	Ethyl benzene	1	1.93E-01	2.21E-05	1.16E-01	1.32E-05	1.16E-01	1.32E-05	
	7	1125	1125	1	1330207	Xylenes	1	4.32E-01	4.93E-05	2.59E-01	2.96E-05	2.59E-01	2.96E-05	
	7	1125	1125	1	110543	Hexane	1	1.07E+00	1.22E-04	6.41E-01	7.32E-05	6.41E-01	7.32E-05	
	7	1125	1125	1	7783064	Hydrogen sulfide	1	1.33E-03	2.34E-07	8.00E-04	1.40E-07	8.00E-04	1.40E-07	
	7	1125	1125	1	106467	p-Dichlorobenzene {1,4-Dicl	1	1.45E-01	1.66E-05	8.72E-02	9.96E-06	8.72E-02	9.96E-06	
	7	1125	1125	1	67561	Methanol	1	8.97E+00	1.02E-03	5.38E+00	6.14E-04	5.38E+00	6.14E-04	
Fugitive Zone 3a	8	1126	1126	1	71432	Benzene	1	9.27E-01	1.82E-04	5.56E-01	1.09E-04	5.56E-01	1.09E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	8	1126	1126	1	108883	Toluene	1	8.67E-01	9.89E-05	5.20E-01	5.93E-05	5.20E-01	5.93E-05	
	8	1126	1126	1	100414	Ethyl benzene	1	3.32E-01	3.79E-05	1.99E-01	2.28E-05	1.99E-01	2.28E-05	
	8	1126	1126	1	1330207	Xylenes	1	4.23E-01	4.82E-05	2.54E-01	2.89E-05	2.54E-01	2.89E-05	
	8	1126	1126	1	110543	Hexane	1	3.39E+00	3.87E-04	2.03E+00	2.32E-04	2.03E+00	2.32E-04	
	8	1126	1126	1	7783064	Hydrogen sulfide	1	1.86E+01	4.24E-03	1.12E+01	2.55E-03	1.12E+01	2.55E-03	
	8	1126	1126	1	106467	p-Dichlorobenzene {1,4-Dicl	1	1.08E-01	1.23E-05	6.48E-02	7.40E-06	6.48E-02	7.40E-06	
	8	1126	1126	1	67561	Methanol	1	6.66E+00	7.60E-04	4.00E+00	4.56E-04	4.00E+00	4.56E-04	
Fugitive Zone 3b	9	1127	1127	1	71432	Benzene	1	9.27E-01	1.82E-04	5.56E-01	1.09E-04	5.56E-01	1.09E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	9	1127	1127	1	108883	Toluene	1	8.67E-01	9.89E-05	5.20E-01	5.93E-05	5.20E-01	5.93E-05	
	9	1127	1127	1	100414	Ethyl benzene	1	3.32E-01	3.79E-05	1.99E-01	2.28E-05	1.99E-01	2.28E-05	
	9	1127	1127	1	1330207	Xylenes	1	4.23E-01	4.82E-05	2.54E-01	2.89E-05	2.54E-01	2.89E-05	
	9	1127	1127	1	110543	Hexane	1	3.39E+00	3.87E-04	2.03E+00	2.32E-04	2.03E+00	2.32E-04	
	9	1127	1127	1	7783064	Hydrogen sulfide	1	1.86E+01	4.24E-03	1.12E+01	2.55E-03	1.12E+01	2.55E-03	
	9	1127	1127	1	106467	p-Dichlorobenzene {1,4-Dicl	1	1.08E-01	1.23E-05	6.48E-02	7.40E-06	6.48E-02	7.40E-06	
	9	1127	1127	1	67561	Methanol	1	6.66E+00	7.60E-04	4.00E+00	4.56E-04	4.00E+00	4.56E-04	
Fugitive Zone 3c	10	1128	1128	1	71432	Benzene	1	9.27E-01	1.82E-04	5.56E-01	1.09E-04	5.56E-01	1.09E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	10	1128	1128	1	108883	Toluene	1	8.67E-01	9.89E-05	5.20E-01	5.93E-05	5.20E-01	5.93E-05	
	10	1128	1128	1	100414	Ethyl benzene	1	3.32E-01	3.79E-05	1.99E-01	2.28E-05	1.99E-01	2.28E-05	
	10	1128	1128	1	1330207	Xylenes	1	4.23E-01	4.82E-05	2.54E-01	2.89E-05	2.54E-01	2.89E-05	
	10	1128	1128	1	110543	Hexane	1	3.39E+00	3.87E-04	2.03E+00	2.32E-04	2.03E+00	2.32E-04	
	10	1128	1128	1	7783064	Hydrogen sulfide	1	1.86E+01	4.24E-03	1.12E+01	2.55E-03	1.12E+01	2.55E-03	
	10	1128	1128	1	106467	p-Dichlorobenzene {1,4-Dicl	1	1.08E-01	1.23E-05	6.48E-02	7.40E-06	6.48E-02	7.40E-06	
	10	1128	1128	1	67561	Methanol	1	6.66E+00	7.60E-04	4.00E+00	4.56E-04	4.00E+00	4.56E-04	
Fugitive Zone 3d	11	1129	1129	1	71432	Benzene	1	9.27E-01	1.82E-04	5.56E-01	1.09E-04	5.56E-01	1.09E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	11	1129	1129	1	108883	Toluene	1	8.67E-01	9.89E-05	5.20E-01	5.93E-05	5.20E-01	5.93E-05	
	11	1129	1129	1	100414	Ethyl benzene	1	3.32E-01	3.79E-05	1.99E-01	2.28E-05	1.99E-01	2.28E-05	
	11	1129	1129	1	1330207	Xylenes	1	4.23E-01	4.82E-05	2.54E-01	2.89E-05	2.54E-01	2.89E-05	
	11	1129	1129	1	110543	Hexane	1	3.39E+00	3.87E-04	2.03E+00	2.32E-04	2.03E+00	2.32E-04	
	11	1129	1129	1	7783064	Hydrogen sulfide	1	1.86E+01	4.24E-03	1.12E+01	2.55E-03	1.12E+01	2.55E-03	
	11	1129	1129	1	106467	p-Dichlorobenzene {1,4-Dicl	1	1.08E-01	1.23E-05	6.48E-02	7.40E-06	6.48E-02	7.40E-06	
	11	1129	1129	1	67561	Methanol	1	6.66E+00	7.60E-04	4.00E+00	4.56E-04	4.00E+00	4.56E-04	
Fugitive Zone 4a	12	1130	1130	1	71432	Benzene	1	1.34E+01	3.01E-03	7.71E+00	1.72E-03	7.71E+00	1.72E-03	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	12	1130	1130	1	108883	Toluene	1	1.16E+01	1.33E-03	6.71E+00	7.66E-04	6.71E+00	7.66E-04	
	12	1130	1130	1	100414	Ethyl benzene	1	2.90E+00	3.31E-04	1.69E+00	1.93E-04	1.69E+00	1.93E-04	
	12	1130	1130	1	1330207	Xylenes	1	2.65E+00	3.02E-04	1.53E+00	1.75E-04	1.53E+00	1.75E-04	
	12	1130	1130	1	110543	Hexane	1	5.33E+01	6.08E-03	3.07E+01	3.50E-03	3.07E+01	3.50E-03	
	12	1130	1130	1	7783064	Hydrogen sulfide	1	3.79E+02	7.01E-02	2.13E+02	4.01E-02	2.13E+02	4.01E-02	
	12	1130	1130	1	106467	p-Dichlorobenzene {1,4-Dicl	1	3.98E-01	4.54E-05	2.32E-01	2.65E-05	2.32E-01	2.65E-05	
	12	1130	1130	1	67561	Methanol	1	2.45E+01	2.80E-03	1.43E+01	1.63E-03	1.43E+01	1.63E-03	
Fugitive Zone 4b	13	1131	1131	1	71432	Benzene	1	1.34E+01	3.01E-03	7.71E+00	1.72E-03	7.71E+00	1.72E-03	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	13	1131	1131	1	108883	Toluene	1	1.16E+01	1.33E-03	6.71E+00	7.66E-04	6.71E+00	7.66E-04	
	13	1131	1131	1	100414	Ethyl benzene	1	2.90E+00	3.31E-04	1.69E+00	1.93E-04	1.69E+00	1.93E-04	
	13	1131	1131	1	1330207	Xylenes	1	2.65E+00	3.02E-04	1.53E+00	1.75E-04	1.53E+00	1.75E-04	
	13	1131	1131	1	110543	Hexane	1	5.33E+01	6.08E-03	3.07E+01	3.50E-03	3.07E+01	3.50E-03	
	13	1131	1131	1	7783064	Hydrogen sulfide	1	3.79E+02	7.01E-02	2.13E+02	4.01E-02	2.13E+02	4.01E-02	
	13	1131	1131	1	106467	p-Dichlorobenzene {1,4-Dicl	1	3.98E-01	4.54E-05	2.32E-01	2.65E-05	2.32E-01	2.65E-05	
	13	1131	1131	1	67561	Methanol	1	2.45E+01	2.80E-03	1.43E+01	1.63E-03	1.43E+01	1.63E-03	
Fugitive Zone 5a	14	1132	1132	1	71432	Benzene	1	8.69E-01	1.76E-04	5.21E-01	1.05E-04	5.21E-01	1.05E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	14	1132	1132	1	108883	Toluene	1	8.20E-01	9.36E-05	4.92E-01	5.61E-05	4.92E-01	5.61E-05	
	14	1132	1132	1	100414	Ethyl benzene	1	2.39E-01	2.73E-05	1.44E-01	1.64E-05	1.44E-01	1.64E-05	
	14	1132	1132	1	1330207	Xylenes	1	2.17E-01	2.47E-05	1.30E-01	1.48E-05	1.30E-01	1.48E-05	
	14	1132	1132	1	110543	Hexane	1	3.68E+00	4.20E-04	2.21E+00	2.52E-04	2.21E+00	2.52E-04	
	14	1132	1132	1	7783064	Hydrogen sulfide	1	2.01E+01	4.60E-03	1.21E+01	2.76E-03	1.21E+01	2.76E-03	
	14	1132	1132	1	106467	p-Dichlorobenzene {1,4-Dicl	1	4.15E-02	4.73E-06	2.49E-02	2.84E-06	2.49E-02	2.84E-06	
	14	1132	1132	1	67561	Methanol	1	2.56E+00	2.92E-04	1.53E+00	1.75E-04	1.53E+00	1.75E-04	
Fugitive Zone 5b	15	1133	1133	1	71432	Benzene	1	8.69E-01	1.76E-04	5.21E-01	1.05E-04	5.21E-01	1.05E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	15	1133	1133	1	108883	Toluene	1	8.20E-01	9.36E-05	4.92E-01	5.61E-05	4.92E-01	5.61E-05	
	15	1133	1133	1	100414	Ethyl benzene	1	2.39E-01	2.73E-05	1.44E-01	1.64E-05	1.44E-01	1.64E-05	
	15	1133	1133	1	1330207	Xylenes	1	2.17E-01	2.47E-05	1.30E-01	1.48E-05	1.30E-01	1.48E-05	
	15	1133	1133	1	110543	Hexane	1	3.68E+00	4.20E-04	2.21E+00	2.52E-04	2.21E+00	2.52E-04	
	15	1133	1133	1	7783064	Hydrogen sulfide	1	2.01E+01	4.60E-03	1.21E+01	2.76E-03	1.21E+01	2.76E-03	
	15	1133	1133	1	106467	p-Dichlorobenzene {1,4-Dicl	1	4.15E-02	4.73E-06	2.49E-02	2.84E-06	2.49E-02	2.84E-06	
	15	1133	1133	1	67561	Methanol	1	2.56E+00	2.92E-04	1.53E+00	1.75E-04	1.53E+00	1.75E-04	
Fugitive Zone 6a	16	1134	1134	1	71432	Benzene	1	9.65E-01	1.95E-04	5.79E-01	1.17E-04	5.79E-01	1.17E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	16	1134	1134	1	108883	Toluene	1	9.11E-01	1.04E-04	5.47E-01	6.24E-05	5.47E-01	6.24E-05	
	16	1134	1134	1	100414	Ethyl benzene	1	2.69E-01	3.07E-05	1.61E-01	1.84E-05	1.61E-01	1.84E-05	
	16	1134	1134	1	1330207	Xylenes	1	2.48E-01	2.83E-05	1.49E-01	1.70E-05	1.49E-01	1.70E-05	
	16	1134	1134	1	110543	Hexane	1	4.07E+00	4.64E-04	2.44E+00	2.79E-04	2.44E+00	2.79E-04	
	16	1134	1134	1	7783064	Hydrogen sulfide	1	2.23E+01	5.09E-03	1.34E+01	3.06E-03	1.34E+01	3.06E-03	
	16	1134	1134	1	106467	p-Dichlorobenzene {1,4-Dicl	1	4.55E-02	5.19E-06	2.73E-02	3.11E-06	2.73E-02	3.11E-06	
	16	1134	1134	1	67561	Methanol	1	2.80E+00	3.20E-04	1.68E+00	1.92E-04	1.68E+00	1.92E-04	
Fugitive Zone 6b	17	1135	1135	1	71432	Benzene	1	9.65E-01	1.95E-04	5.79E-01	1.17E-04	5.79E-01	1.17E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	17	1135	1135	1	108883	Toluene	1	9.11E-01	1.04E-04	5.47E-01	6.24E-05	5.47E-01	6.24E-05	
	17	1135	1135	1	100414	Ethyl benzene	1	2.69E-01	3.07E-05	1.61E-01	1.84E-05	1.61E-01	1.84E-05	
	17	1135	1135	1	1330207	Xylenes	1	2.48E-01	2.83E-05	1.49E-01	1.70E-05	1.49E-01	1.70E-05	
	17	1135	1135	1	110543	Hexane	1	4.07E+00	4.64E-04	2.44E+00	2.79E-04	2.44E+00	2.79E-04	
	17	1135	1135	1	7783064	Hydrogen sulfide	1	2.23E+01	5.09E-03	1.34E+01	3.06E-03	1.34E+01	3.06E-03	
	17	1135	1135	1	106467	p-Dichlorobenzene {1,4-Dicl	1	4.55E-02	5.19E-06	2.73E-02	3.11E-06	2.73E-02	3.11E-06	
	17	1135	1135	1	67561	Methanol	1	2.80E+00	3.20E-04	1.68E+00	1.92E-04	1.68E+00	1.92E-04	
Fugitive Zone 7a	18	1136	1136	1	71432	Benzene	1	4.57E+00	9.21E-04	2.74E+00	5.52E-04	2.74E+00	5.52E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	18	1136	1136	1	108883	Toluene	1	4.32E+00	4.93E-04	2.59E+00	2.96E-04	2.59E+00	2.96E-04	
	18	1136	1136	1	100414	Ethyl benzene	1	1.31E+00	1.49E-04	7.84E-01	8.95E-05	7.84E-01	8.95E-05	
	18	1136	1136	1	1330207	Xylenes	1	1.32E+00	1.51E-04	7.94E-01	9.06E-05	7.94E-01	9.06E-05	
	18	1136	1136	1	110543	Hexane	1	1.91E+01	2.19E-03	1.15E+01	1.31E-03	1.15E+01	1.31E-03	
	18	1136	1136	1	7783064	Hydrogen sulfide	1	1.05E+02	2.40E-02	6.30E+01	1.44E-02	6.30E+01	1.44E-02	
	18	1136	1136	1	106467	p-Dichlorobenzene {1,4-Dicl	1	2.51E-01	2.86E-05	1.51E-01	1.72E-05	1.51E-01	1.72E-05	
	18	1136	1136	1	67561	Methanol	1	1.55E+01	1.77E-03	9.29E+00	1.06E-03	9.29E+00	1.06E-03	
Fugitive Zone 7b	19	1137	1137	1	71432	Benzene	1	4.57E+00	9.21E-04	2.74E+00	5.52E-04	2.74E+00	5.52E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	19	1137	1137	1	108883	Toluene	1	4.32E+00	4.93E-04	2.59E+00	2.96E-04	2.59E+00	2.96E-04	
	19	1137	1137	1	100414	Ethyl benzene	1	1.31E+00	1.49E-04	7.84E-01	8.95E-05	7.84E-01	8.95E-05	
	19	1137	1137	1	1330207	Xylenes	1	1.32E+00	1.51E-04	7.94E-01	9.06E-05	7.94E-01	9.06E-05	
	19	1137	1137	1	110543	Hexane	1	1.91E+01	2.19E-03	1.15E+01	1.31E-03	1.15E+01	1.31E-03	
	19	1137	1137	1	7783064	Hydrogen sulfide	1	1.05E+02	2.40E-02	6.30E+01	1.44E-02	6.30E+01	1.44E-02	
	19	1137	1137	1	106467	p-Dichlorobenzene {1,4-Dicl	1	2.51E-01	2.86E-05	1.51E-01	1.72E-05	1.51E-01	1.72E-05	
	19	1137	1137	1	67561	Methanol	1	1.55E+01	1.77E-03	9.29E+00	1.06E-03	9.29E+00	1.06E-03	
Fugitive Zone 8a	20	1138	1138	1	71432	Benzene	1	1.23E+00	2.61E-04	7.40E-01	1.57E-04	7.40E-01	1.57E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
	20	1138	1138	1	108883	Toluene	1	5.11E-01	5.83E-05	3.06E-01	3.50E-05	3.06E-01	3.50E-05	
	20	1138	1138	1	100414	Ethyl benzene	1	2.15E-01	2.45E-05	1.29E-01	1.47E-05	1.29E-01	1.47E-05	
	20	1138	1138	1	1330207	Xylenes	1	4.29E-01	4.90E-05	2.58E-01	2.94E-05	2.58E-01	2.94E-05	
	20	1138	1138	1	110543	Hexane	1	6.52E+00	7.45E-04	3.91E+00	4.47E-04	3.91E+00	4.47E-04	
	20	1138	1138	1	7783064	Hydrogen sulfide	1	7.84E+01	9.07E-03	4.71E+01	5.44E-03	4.71E+01	5.44E-03	
	20	1138	1138	1	106467	p-Dichlorobenzene {1,4-Dicl	1	1.43E-01	1.64E-05	8.60E-02	9.82E-06	8.60E-02	9.82E-06	
	20	1138	1138	1	67561	Methanol	1	8.84E+00	1.01E-03	5.30E+00	6.06E-04	5.30E+00	6.06E-04	
Fugitive Zone 8b	21	1139	1139	1	71432	Benzene	1	1.23E+00	2.61E-04	7.40E-01	1.57E-04	7.40E-01	1.57E-04	Emission Factors based on SBCAPCD Spreadsheets Table F7-3/4
	21	1139	1139	1	108883	Toluene	1	5.11E-01	5.83E-05	3.06E-01	3.50E-05	3.06E-01	3.50E-05	
	21	1139	1139	1	100414	Ethyl benzene	1	2.15E-01	2.45E-05	1.29E-01	1.47E-05	1.29E-01	1.47E-05	
	21	1139	1139	1	1330207	Xylenes	1	4.29E-01	4.90E-05	2.58E-01	2.94E-05	2.58E-01	2.94E-05	
	21	1139	1139	1	110543	Hexane	1	6.52E+00	7.45E-04	3.91E+00	4.47E-04	3.91E+00	4.47E-04	
	21	1139	1139	1	7783064	Hydrogen sulfide	1	7.84E+01	9.07E-03	4.71E+01	5.44E-03	4.71E+01	5.44E-03	
	21	1139	1139	1	106467	p-Dichlorobenzene {1,4-Dicl	1	1.43E-01	1.64E-05	8.60E-02	9.82E-06	8.60E-02	9.82E-06	
	21	1139	1139	1	67561	Methanol	1	8.84E+00	1.01E-03	5.30E+00	6.06E-04	5.30E+00	6.06E-04	
Sumps		1140	1140	1	71432	Benzene	1	4.56E-01	9.30E-05	4.56E-01	9.30E-05	4.56E-01	9.30E-05	Emission Factors based on SBCAPCD Spreadsheets Part F4
		1140	1140	1	108883	Toluene	1	4.27E-01	4.88E-05	4.27E-01	4.88E-05	4.27E-01	4.88E-05	
		1140	1140	1	100414	Ethyl benzene	1	1.16E-01	1.32E-05	1.16E-01	1.32E-05	1.16E-01	1.32E-05	
		1140	1140	1	1330207	Xylenes	1	9.16E-02	1.05E-05	9.16E-02	1.05E-05	9.16E-02	1.05E-05	
		1140	1140	1	110543	Hexane	1	1.96E+00	2.24E-04	1.96E+00	2.24E-04	1.96E+00	2.24E-04	
		1140	1140	1	7783064	Hydrogen sulfide	1	1.08E+01	2.45E-03	1.08E+01	2.45E-03	1.08E+01	2.45E-03	
Heater H-201		1143	1143	1	75070	Acetaldehyde	1	3.63E-04	3.63E-04	3.63E-04	3.63E-04	3.63E-04	3.63E-04	Emission Factors based on SBCAPCD Spreadsheets Part F1
		1143	1143	1	107028	Acrolein	1	2.21E-06	2.21E-06	2.21E-06	2.21E-06	2.21E-06	2.21E-06	
		1143	1143	1	71432	Benzene	1	2.85E-04	2.85E-04	2.85E-04	2.85E-04	2.85E-04	2.85E-04	
		1143	1143	1	50000	Formaldehyde	1	6.18E-04	6.18E-04	6.18E-04	6.18E-04	6.18E-04	6.18E-04	
		1143	1143	1	110543	Hexane	1	1.70E-04	1.70E-04	1.70E-04	1.70E-04	1.70E-04	1.70E-04	
		1143	1143	1	115071	Propylene	1	7.59E-05	7.59E-05	7.59E-05	7.59E-05	7.59E-05	7.59E-05	
		1143	1143	1	108883	Toluene	1	6.90E-05	6.90E-05	6.90E-05	6.90E-05	6.90E-05	6.90E-05	
		1143	1143	1	1330207	Xylenes	1	2.55E-05	2.55E-05	2.55E-05	2.55E-05	2.55E-05	2.55E-05	
		1143	1143	1	7429905	Aluminum	1	1.56E-04	1.56E-04	1.56E-04	1.56E-04	1.56E-04	1.56E-04	
		1143	1143	1	7440360	Antimony	1	3.30E-06	3.30E-06	3.30E-06	3.30E-06	3.30E-06	3.30E-06	
		1143	1143	1	7440382	Arsenic and Compounds (in	1	9.09E-08	9.09E-08	9.09E-08	9.09E-08	9.09E-08	9.09E-08	
		1143	1143	1	7440393	Barium	1	7.11E-05	7.11E-05	7.11E-05	7.11E-05	7.11E-05	7.11E-05	
		1143	1143	1	7440417	Beryllium	1	3.39E-08	3.39E-08	3.39E-08	3.39E-08	3.39E-08	3.39E-08	
		1143	1143	1	7440439	Cadmium	1	1.22E-05	1.22E-05	1.22E-05	1.22E-05	1.22E-05	1.22E-05	
		1143	1143	1	7440473	Chromium	1	3.21E-06	3.21E-06	3.21E-06	3.21E-06	3.21E-06	3.21E-06	
		1143	1143	1	18540299	Chromium, hexavalent (and	1	4.11E-07	4.11E-07	4.11E-07	4.11E-07	4.11E-07	4.11E-07	
		1143	1143	1	7440508	Copper	1	3.09E-06	3.09E-06	3.09E-06	3.09E-06	3.09E-06	3.09E-06	
		1143	1143	1	7439921	Lead compounds (inorganic	1	2.68E-06	2.68E-06	2.68E-06	2.68E-06	2.68E-06	2.68E-06	
		1143	1143	1	7439965	Manganese	1	6.60E-06	6.60E-06	6.60E-06	6.60E-06	6.60E-06	6.60E-06	
		1143	1143	1	7440020	Nickel	1	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	
		1143	1143	1	7723140	Phosphorus	1	2.24E-05	2.24E-05	2.24E-05	2.24E-05	2.24E-05	2.24E-05	
		1143	1143	1	7440224	Silver	1	5.70E-08	5.70E-08	5.70E-08	5.70E-08	5.70E-08	5.70E-08	
		1143	1143	1	7440622	Vanadium (fume or dust)	1	1.17E-07	1.17E-07	1.17E-07	1.17E-07	1.17E-07	1.17E-07	
		1143	1143	1	7440666	Zinc	1	7.50E-05	7.50E-05	7.50E-05	7.50E-05	7.50E-05	7.50E-05	
		1143	1143	1	91203	Naphthalene [PAH, POM]	1	1.49E-06	1.49E-06	1.49E-06	1.49E-06	1.49E-06	1.49E-06	
		1143	1143	1	208968	Acenaphthylene [PAH, POM	1	8.64E-09	8.64E-09	8.64E-09	8.64E-09	8.64E-09	8.64E-09	
		1143	1143	1	83329	Acenaphthene [PAH, POM]	1	1.10E-08	1.10E-08	1.10E-08	1.10E-08	1.10E-08	1.10E-08	
		1143	1143	1	86737	Fluorene [PAH, POM]	1	4.62E-08	4.62E-08	4.62E-08	4.62E-08	4.62E-08	4.62E-08	
		1143	1143	1	85018	Phenanthrene [PAH, POM]	1	1.20E-07	1.20E-07	1.20E-07	1.20E-07	1.20E-07	1.20E-07	
		1143	1143	1	120127	Anthracene [PAH, POM]	1	1.49E-08	1.49E-08	1.49E-08	1.49E-08	1.49E-08	1.49E-08	
		1143	1143	1	206440	Fluoranthene [PAH, POM]	1	1.18E-08	1.18E-08	1.18E-08	1.18E-08	1.18E-08	1.18E-08	
		1143	1143	1	129000	Pyrene [PAH, POM]	1	1.20E-08	1.20E-08	1.20E-08	1.20E-08	1.20E-08	1.20E-08	
		1143	1143	1	218019	Chrysene [PAH, POM]	1	1.89E-09	1.89E-09	1.89E-09	1.89E-09	1.89E-09	1.89E-09	
		1143	1143	1	56553	Benz[a]anthracene [PAH, P	1	5.55E-09	5.55E-09	5.55E-09	5.55E-09	5.55E-09	5.55E-09	
		1143	1143	1	205992	Benzo[b]fluoranthene [PAH,	1	6.93E-09	6.93E-09	6.93E-09	6.93E-09	6.93E-09	6.93E-09	
		1143	1143	1	207089	Benzo[k]fluoranthene [PAH,	1	1.89E-09	1.89E-09	1.89E-09	1.89E-09	1.89E-09	1.89E-09	
		1143	1143	1	50328	Benzo[a]pyrene [PAH, POM]	1	1.89E-09	1.89E-09	1.89E-09	1.89E-09	1.89E-09	1.89E-09	
		1143	1143	1	193395	Indeno[1,2,3-cd]pyrene [PAH	1	1.89E-09	1.89E-09	1.89E-09	1.89E-09	1.89E-09	1.89E-09	
		1143	1143	1	53703	Dibenz[a,h]anthracene [PAH	1	1.89E-09	1.89E-09	1.89E-09	1.89E-09	1.89E-09	1.89E-09	
		1143	1143	1	191242	Benzo[g,h,i]perylene [PAH,	1	1.89E-09	1.89E-09	1.89E-09	1.89E-09	1.89E-09	1.89E-09	
Heater H-204		1146	1146	1	75070	Acetaldehyde	1	4.17E+00	3.03E-03	2.09E+01	3.03E-03	2.09E+01	3.03E-03	Emission Factors based on SBCAPCD Spreadsheets Part F1
		1146	1146	1	107028	Acrolein	1	2.54E-02	1.84E-05	1.27E-01	1.84E-05	1.27E-01	1.84E-05	
		1146	1146	1	71432	Benzene	1	3.27E+00	2.38E-03	1.64E+01	2.38E-03	1.64E+01	2.38E-03	
		1146	1146	1	50000	Formaldehyde	1	7.09E+00	5.15E-03	3.55E+01	5.15E-03	3.55E+01	5.15E-03	
		1146	1146	1	110543	Hexane	1	1.95E+00	1.42E-03	9.78E+00	1.42E-03	9.78E+00	1.42E-03	
		1146	1146	1	115071	Propylene	1	8.71E-01	6.33E-04	4.37E+00	6.33E-04	4.37E+00	6.33E-04	
		1146	1146	1	108883	Toluene	1	7.92E-01	5.75E-04	3.97E+00	5.75E-04	3.97E+00	5.75E-04	
		1146	1146	1	1330207	Xylenes	1	2.93E-01	2.13E-04	1.47E+00	2.13E-04	1.47E+00	2.13E-04	
		1146	1146	1	7429905	Aluminum	1	1.79E+00	1.30E-03	8.97E+00	1.30E-03	8.97E+00	1.30E-03	
		1146	1146	1	7440360	Antimony	1	3.79E-02	2.75E-05	1.90E-01	2.75E-05	1.90E-01	2.75E-05	
		1146	1146	1	7440382	Arsenic and Compounds (in	1	1.04E-03	7.58E-07	5.23E-03	7.58E-07	5.23E-03	7.58E-07	
		1146	1146	1	7440393	Barium	1	8.16E-01	5.93E-04	4.09E+00	5.93E-04	4.09E+00	5.93E-04	
		1146	1146	1	7440417	Beryllium	1	3.89E-04	2.83E-07	1.95E-03	2.83E-07	1.95E-03	2.83E-07	
		1146	1146	1	7440439	Cadmium	1	1.40E-01	1.02E-04	7.02E-01	1.02E-04	7.02E-01	1.02E-04	
		1146	1146	1	7440473	Chromium	1	3.68E-02	2.68E-05	1.85E-01	2.68E-05	1.85E-01	2.68E-05	
		1146	1146	1	18540299	Chromium, hexavalent (and	1	4.72E-03	3.43E-06	2.36E-02	3.43E-06	2.36E-02	3.43E-06	
		1146	1146	1	7440508	Copper	1	3.55E-02	2.58E-05	1.78E-01	2.58E-05	1.78E-01	2.58E-05	
		1146	1146	1	7439921	Lead compounds (inorganic	1	3.07E-02	2.23E-05	1.54E-01	2.23E-05	1.54E-01	2.23E-05	
		1146	1146	1	7439965	Manganese	1	7.57E-02	5.50E-05	3.80E-01	5.50E-05	3.80E-01	5.50E-05	
		1146	1146	1	7440020	Nickel	1	1.38E-02	1.00E-05	6.90E-02	1.00E-05	6.90E-02	1.00E-05	
		1146	1146	1	7723140	Phosphorus	1	2.57E-01	1.87E-04	1.29E+00	1.87E-04	1.29E+00	1.87E-04	
		1146	1146	1	7440224	Silver	1	6.54E-04	4.75E-07	3.28E-03	4.75E-07	3.28E-03	4.75E-07	
		1146	1146	1	7440622	Vanadium (fume or dust)	1	1.34E-03	9.75E-07	6.73E-03	9.75E-07	6.73E-03	9.75E-07	
		1146	1146	1	7440666	Zinc	1	8.61E-01	6.25E-04	4.31E+00	6.25E-04	4.31E+00	6.25E-04	
		1146	1146	1	91203	Naphthalene [PAH, POM]	1	1.71E-02	1.25E-05	8.59E-02	1.25E-05	8.59E-02	1.25E-05	
		1146	1146	1	208968	Acenaphthylene [PAH, POM	1	9.91E-05	7.20E-08	4.97E-04	7.20E-08	4.97E-04	7.20E-08	
		1146	1146	1	83329	Acenaphthene [PAH, POM]	1	1.27E-04	9.20E-08	6.35E-04	9.20E-08	6.35E-04	9.20E-08	
		1146	1146	1	86737	Fluorene [PAH, POM]	1	5.30E-04	3.85E-07	2.66E-03	3.85E-07	2.66E-03	3.85E-07	
		1146	1146	1	85018	Phenanthrene [PAH, POM]	1	1.38E-03	1.00E-06	6.92E-03	1.00E-06	6.92E-03	1.00E-06	
		1146	1146	1	120127	Anthracene [PAH, POM]	1	1.70E-04	1.24E-07	8.54E-04	1.24E-07	8.54E-04	1.24E-07	
		1146	1146	1	206440	Fluoranthene [PAH, POM]	1	1.35E-04	9.80E-08	6.76E-04	9.80E-08	6.76E-04	9.80E-08	
		1146	1146	1	129000	Pyrene [PAH, POM]	1	1.38E-04	1.00E-07	6.92E-04	1.00E-07	6.92E-04	1.00E-07	
		1146	1146	1	218019	Chrysene [PAH, POM]	1	2.17E-05	1.57E-08	1.09E-04	1.57E-08	1.09E-04	1.57E-08	
		1146	1146	1	56553	Benz[a]anthracene [PAH, P	1	6.37E-05	4.63E-08	3.19E-04	4.63E-08	3.19E-04	4.63E-08	
		1146	1146	1	205992	Benzo[b]fluoranthene [PAH,	1	7.95E-05	5.78E-08	3.99E-04	5.78E-08	3.99E-04	5.78E-08	
		1146	1146	1	207089	Benzo[k]fluoranthene [PAH,	1	2.17E-05	1.57E-08	1.09E-04	1.57E-08	1.09E-04	1.57E-08	
		1146	1146	1	50328	Benzo[a]pyrene [PAH, POM]	1	2.17E-05	1.57E-08	1.09E-04	1.57E-08	1.09E-04	1.57E-08	
		1146	1146	1	193395	Indeno[1,2,3-cd]pyrene [PAH	1	2.17E-05	1.57E-08	1.09E-04	1.57E-08	1.09E-04	1.57E-08	
		1146	1146	1	53703	Dibenz[a,h]anthracene [PAH	1	2.17E-05	1.57E-08	1.09E-04	1.57E-08	1.09E-04	1.57E-08	
		1146	1146	1	191242	Benzo[g,h,i]perylene [PAH,	1	2.17E-05	1.57E-08	1.09E-04	1.57E-08	1.09E-04	1.57E-08	
Thermal Oxidizer H-205		1147	1147	1	75070	Acetaldehyde	1	1.94E+01	4.24E-03	2.44E+01	4.24E-03	2.44E+01	4.24E-03	Emission Factors based on SBCAPCD Spreadsheets Part F1
		1147	1147	1	107028	Acrolein	1	1.18E-01	2.58E-05	1.49E-01	2.58E-05	1.49E-01	2.58E-05	
		1147	1147	1	71432	Benzene	1	1.52E+01	3.33E-03	1.92E+01	3.33E-03	1.92E+01	3.33E-03	
		1147	1147	1	50000	Formaldehyde	1	3.30E+01	7.21E-03	4.16E+01	7.21E-03	4.16E+01	7.21E-03	
		1147	1147	1	110543	Hexane	1	9.10E+00	1.98E-03	1.14E+01	1.98E-03	1.14E+01	1.98E-03	
		1147	1147	1	115071	Propylene	1	4.06E+00	8.86E-04	5.10E+00	8.86E-04	5.10E+00	8.86E-04	
		1147	1147	1	108883	Toluene	1	3.69E+00	8.05E-04	4.64E+00	8.05E-04	4.64E+00	8.05E-04	
		1147	1147	1	1330207	Xylenes	1	1.36E+00	2.98E-04	1.71E+00	2.98E-04	1.71E+00	2.98E-04	
		1147	1147	1	7429905	Aluminum	1	8.34E+00	1.82E-03	1.05E+01	1.82E-03	1.05E+01	1.82E-03	
		1147	1147	1	7440360	Antimony	1	1.76E-01	3.85E-05	2.22E-01	3.85E-05	2.22E-01	3.85E-05	
		1147	1147	1	7440382	Arsenic and Compounds (in	1	4.86E-03	1.06E-06	6.11E-03	1.06E-06	6.11E-03	1.06E-06	
		1147	1147	1	7440393	Barium	1	3.80E+00	8.30E-04	4.78E+00	8.30E-04	4.78E+00	8.30E-04	
		1147	1147	1	7440417	Beryllium	1	1.81E-03	3.96E-07	2.28E-03	3.96E-07	2.28E-03	3.96E-07	
		1147	1147	1	7440439	Cadmium	1	6.53E-01	1.42E-04	8.21E-01	1.42E-04	8.21E-01	1.42E-04	
		1147	1147	1	7440473	Chromium	1	1.72E-01	3.75E-05	2.16E-01	3.75E-05	2.16E-01	3.75E-05	
		1147	1147	1	18540299	Chromium, hexavalent (and	1	2.20E-02	4.80E-06	2.76E-02	4.80E-06	2.76E-02	4.80E-06	
		1147	1147	1	7440508	Copper	1	1.65E-01	3.61E-05	2.08E-01	3.61E-05	2.08E-01	3.61E-05	
		1147	1147	1	7439921	Lead compounds (inorganic	1	1.43E-01	3.13E-05	1.80E-01	3.13E-05	1.80E-01	3.13E-05	
		1147	1147	1	7439965	Manganese	1	3.53E-01	7.70E-05	4.44E-01	7.70E-05	4.44E-01	7.70E-05	
		1147	1147	1	7440020	Nickel	1	6.42E-02	1.40E-05	8.07E-02	1.40E-05	8.07E-02	1.40E-05	
		1147	1147	1	7723140	Phosphorus	1	1.20E+00	2.61E-04	1.51E+00	2.61E-04	1.51E+00	2.61E-04	
		1147	1147	1	7440224	Silver	1	3.05E-03	6.65E-07	3.83E-03	6.65E-07	3.83E-03	6.65E-07	
		1147	1147	1	7440622	Vanadium (fume or dust)	1	6.26E-03	1.37E-06	7.87E-03	1.37E-06	7.87E-03	1.37E-06	
		1147	1147	1	7440666	Zinc	1	4.01E+00	8.75E-04	5.04E+00	8.75E-04	5.04E+00	8.75E-04	
		1147	1147	1	91203	Naphthalene [PAH, POM]	1	7.99E-02	1.74E-05	1.00E-01	1.74E-05	1.00E-01	1.74E-05	
		1147	1147	1	208968	Acenaphthylene [PAH, POM	1	4.62E-04	1.01E-07	5.81E-04	1.01E-07	5.81E-04	1.01E-07	
		1147	1147	1	83329	Acenaphthene [PAH, POM]	1	5.90E-04	1.29E-07	7.42E-04	1.29E-07	7.42E-04	1.29E-07	
		1147	1147	1	86737	Fluorene [PAH, POM]	1	2.47E-03	5.39E-07	3.11E-03	5.39E-07	3.11E-03	5.39E-07	
		1147	1147	1	85018	Phenanthrene [PAH, POM]	1	6.43E-03	1.40E-06	8.09E-03	1.40E-06	8.09E-03	1.40E-06	
		1147	1147	1	120127	Anthracene [PAH, POM]	1	7.94E-04	1.73E-07	9.99E-04	1.73E-07	9.99E-04	1.73E-07	
		1147	1147	1	206440	Fluoranthene [PAH, POM]	1	6.29E-04	1.37E-07	7.91E-04	1.37E-07	7.91E-04	1.37E-07	
		1147	1147	1	129000	Pyrene [PAH, POM]	1	6.43E-04	1.40E-07	8.09E-04	1.40E-07	8.09E-04	1.40E-07	
		1147	1147	1	218019	Chrysene [PAH, POM]	1	1.01E-04	2.20E-08	1.27E-04	2.20E-08	1.27E-04	2.20E-08	
		1147	1147	1	56553	Benz[a]anthracene [PAH, P	1	2.97E-04	6.48E-08	3.73E-04	6.48E-08	3.73E-04	6.48E-08	
		1147	1147	1	205992	Benzo[b]fluoranthene [PAH,	1	3.71E-04	8.09E-08	4.66E-04	8.09E-08	4.66E-04	8.09E-08	
		1147	1147	1	207089	Benzo[k]fluoranthene [PAH,	1	1.01E-04	2.20E-08	1.27E-04	2.20E-08	1.27E-04	2.20E-08	
		1147	1147	1	50328	Benzo[a]pyrene [PAH, POM]	1	1.01E-04	2.20E-08	1.27E-04	2.20E-08	1.27E-04	2.20E-08	
		1147	1147	1	193395	Indeno[1,2,3-cd]pyrene [PAH	1	1.01E-04	2.20E-08	1.27E-04	2.20E-08	1.27E-04	2.20E-08	
		1147	1147	1	53703	Dibenz[a,h]anthracene [PAH	1	1.01E-04	2.20E-08	1.27E-04	2.20E-08	1.27E-04	2.20E-08	
		1147	1147	1	191242	Benzo[g,h,i]perylene [PAH,	1	1.01E-04	2.20E-08	1.27E-04	2.20E-08	1.27E-04	2.20E-08	
Thermal Oxidizer H-206		1148	1148	1	75070	Acetaldehyde	1	7.63E-01	3.63E-03	7.63E-01	3.63E-03	7.63E-01	3.63E-03	Emission Factors based on SBCAPCD Spreadsheets Part F1
		1148	1148	1	107028	Acrolein	1	4.64E-03	2.21E-05	4.64E-03	2.21E-05	4.64E-03	2.21E-05	
		1148	1148	1	71432	Benzene	1	5.99E-01	2.85E-03	5.99E-01	2.85E-03	5.99E-01	2.85E-03	

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
		1148	1148	1	50000	Formaldehyde	1	1.30E+00	6.18E-03	1.30E+00	6.18E-03	1.30E+00	6.18E-03	
		1148	1148	1	110543	Hexane	1	3.57E-01	1.70E-03	3.57E-01	1.70E-03	3.57E-01	1.70E-03	
		1148	1148	1	115071	Propylene	1	1.59E-01	7.59E-04	1.59E-01	7.59E-04	1.59E-01	7.59E-04	
		1148	1148	1	108883	Toluene	1	1.45E-01	6.90E-04	1.45E-01	6.90E-04	1.45E-01	6.90E-04	
		1148	1148	1	1330207	Xylenes	1	5.36E-02	2.55E-04	5.36E-02	2.55E-04	5.36E-02	2.55E-04	
		1148	1148	1	7429905	Aluminum	1	3.28E-01	1.56E-03	3.28E-01	1.56E-03	3.28E-01	1.56E-03	
		1148	1148	1	7440360	Antimony	1	6.93E-03	3.30E-05	6.93E-03	3.30E-05	6.93E-03	3.30E-05	
		1148	1148	1	7440382	Arsenic and Compounds (in	1	1.91E-04	9.09E-07	1.91E-04	9.09E-07	1.91E-04	9.09E-07	
		1148	1148	1	7440393	Barium	1	1.49E-01	7.11E-04	1.49E-01	7.11E-04	1.49E-01	7.11E-04	
		1148	1148	1	7440417	Beryllium	1	7.12E-05	3.39E-07	7.12E-05	3.39E-07	7.12E-05	3.39E-07	
		1148	1148	1	7440439	Cadmium	1	2.56E-02	1.22E-04	2.56E-02	1.22E-04	2.56E-02	1.22E-04	
		1148	1148	1	7440473	Chromium	1	6.74E-03	3.21E-05	6.74E-03	3.21E-05	6.74E-03	3.21E-05	
		1148	1148	1	18540299	Chromium, hexavalent (and	1	8.63E-04	4.11E-06	8.63E-04	4.11E-06	8.63E-04	4.11E-06	
		1148	1148	1	7440508	Copper	1	6.49E-03	3.09E-05	6.49E-03	3.09E-05	6.49E-03	3.09E-05	
		1148	1148	1	7439921	Lead compounds (inorganic	1	5.63E-03	2.68E-05	5.63E-03	2.68E-05	5.63E-03	2.68E-05	
		1148	1148	1	7439965	Manganese	1	1.39E-02	6.60E-05	1.39E-02	6.60E-05	1.39E-02	6.60E-05	
		1148	1148	1	7440020	Nickel	1	2.52E-03	1.20E-05	2.52E-03	1.20E-05	2.52E-03	1.20E-05	
		1148	1148	1	7723140	Phosphorus	1	4.71E-02	2.24E-04	4.71E-02	2.24E-04	4.71E-02	2.24E-04	
		1148	1148	1	7440224	Silver	1	1.20E-04	5.70E-07	1.20E-04	5.70E-07	1.20E-04	5.70E-07	
		1148	1148	1	7440622	Vanadium (fume or dust)	1	2.46E-04	1.17E-06	2.46E-04	1.17E-06	2.46E-04	1.17E-06	
		1148	1148	1	7440666	Zinc	1	1.58E-01	7.50E-04	1.58E-01	7.50E-04	1.58E-01	7.50E-04	
		1148	1148	1	91203	Naphthalene [PAH, POM]	1	3.14E-03	1.49E-05	3.14E-03	1.49E-05	3.14E-03	1.49E-05	
		1148	1148	1	208968	Acenaphthylene [PAH, POM	1	1.81E-05	8.64E-08	1.81E-05	8.64E-08	1.81E-05	8.64E-08	
		1148	1148	1	83329	Acenaphthene [PAH, POM]	1	2.32E-05	1.10E-07	2.32E-05	1.10E-07	2.32E-05	1.10E-07	
		1148	1148	1	86737	Fluorene [PAH, POM]	1	9.71E-05	4.62E-07	9.71E-05	4.62E-07	9.71E-05	4.62E-07	
		1148	1148	1	85018	Phenanthrene [PAH, POM]	1	2.53E-04	1.20E-06	2.53E-04	1.20E-06	2.53E-04	1.20E-06	
		1148	1148	1	120127	Anthracene [PAH, POM]	1	3.12E-05	1.49E-07	3.12E-05	1.49E-07	3.12E-05	1.49E-07	
		1148	1148	1	206440	Fluoranthene [PAH, POM]	1	2.47E-05	1.18E-07	2.47E-05	1.18E-07	2.47E-05	1.18E-07	
		1148	1148	1	129000	Pyrene [PAH, POM]	1	2.53E-05	1.20E-07	2.53E-05	1.20E-07	2.53E-05	1.20E-07	
		1148	1148	1	218019	Chrysene [PAH, POM]	1	3.96E-06	1.89E-08	3.96E-06	1.89E-08	3.96E-06	1.89E-08	
		1148	1148	1	56553	Benz[a]anthracene [PAH, P	1	1.17E-05	5.55E-08	1.17E-05	5.55E-08	1.17E-05	5.55E-08	
		1148	1148	1	205992	Benzo[b]fluoranthene [PAH,	1	1.46E-05	6.93E-08	1.46E-05	6.93E-08	1.46E-05	6.93E-08	
		1148	1148	1	207089	Benzo[k]fluoranthene [PAH,	1	3.96E-06	1.89E-08	3.96E-06	1.89E-08	3.96E-06	1.89E-08	
		1148	1148	1	50328	Benzo[a]pyrene [PAH, POM	1	3.96E-06	1.89E-08	3.96E-06	1.89E-08	3.96E-06	1.89E-08	
		1148	1148	1	193395	Indeno[1,2,3-cd]pyrene [PA	1	3.96E-06	1.89E-08	3.96E-06	1.89E-08	3.96E-06	1.89E-08	
		1148	1148	1	53703	Dibenz[a,h]anthracene [PAH	1	3.96E-06	1.89E-08	3.96E-06	1.89E-08	3.96E-06	1.89E-08	
		1148	1148	1	191242	Benzo[g,h,i]perylene [PAH,	1	3.96E-06	1.89E-08	3.96E-06	1.89E-08	3.96E-06	1.89E-08	
Thermal Oxidizer H-207		1149	1149	1	75070	Acetaldehyde	1	2.13E+00	3.63E-03	2.13E+00	3.63E-03	2.13E+00	3.63E-03	Emission Factors based on SBCAPCD Spreadsheets Part F1
		1149	1149	1	107028	Acrolein	1	1.30E-02	2.21E-05	1.30E-02	2.21E-05	1.30E-02	2.21E-05	
		1149	1149	1	71432	Benzene	1	1.67E+00	2.85E-03	1.67E+00	2.85E-03	1.67E+00	2.85E-03	
		1149	1149	1	50000	Formaldehyde	1	3.63E+00	6.18E-03	3.63E+00	6.18E-03	3.63E+00	6.18E-03	
		1149	1149	1	110543	Hexane	1	9.99E-01	1.70E-03	9.99E-01	1.70E-03	9.99E-01	1.70E-03	
		1149	1149	1	115071	Propylene	1	4.46E-01	7.59E-04	4.46E-01	7.59E-04	4.46E-01	7.59E-04	
		1149	1149	1	108883	Toluene	1	4.05E-01	6.90E-04	4.05E-01	6.90E-04	4.05E-01	6.90E-04	
		1149	1149	1	1330207	Xylenes	1	1.50E-01	2.55E-04	1.50E-01	2.55E-04	1.50E-01	2.55E-04	
		1149	1149	1	7429905	Aluminum	1	9.17E-01	1.56E-03	9.17E-01	1.56E-03	9.17E-01	1.56E-03	
		1149	1149	1	7440360	Antimony	1	1.94E-02	3.30E-05	1.94E-02	3.30E-05	1.94E-02	3.30E-05	
		1149	1149	1	7440382	Arsenic and Compounds (in	1	5.34E-04	9.09E-07	5.34E-04	9.09E-07	5.34E-04	9.09E-07	
		1149	1149	1	7440393	Barium	1	4.18E-01	7.11E-04	4.18E-01	7.11E-04	4.18E-01	7.11E-04	
		1149	1149	1	7440417	Beryllium	1	1.99E-04	3.39E-07	1.99E-04	3.39E-07	1.99E-04	3.39E-07	
		1149	1149	1	7440439	Cadmium	1	7.17E-02	1.22E-04	7.17E-02	1.22E-04	7.17E-02	1.22E-04	
		1149	1149	1	7440473	Chromium	1	1.89E-02	3.21E-05	1.89E-02	3.21E-05	1.89E-02	3.21E-05	
		1149	1149	1	18540299	Chromium, hexavalent (and	1	2.41E-03	4.11E-06	2.41E-03	4.11E-06	2.41E-03	4.11E-06	
		1149	1149	1	7440508	Copper	1	1.82E-02	3.09E-05	1.82E-02	3.09E-05	1.82E-02	3.09E-05	
		1149	1149	1	7439921	Lead compounds (inorganic	1	1.57E-02	2.68E-05	1.57E-02	2.68E-05	1.57E-02	2.68E-05	
		1149	1149	1	7439965	Manganese	1	3.88E-02	6.60E-05	3.88E-02	6.60E-05	3.88E-02	6.60E-05	
		1149	1149	1	7440020	Nickel	1	7.05E-03	1.20E-05	7.05E-03	1.20E-05	7.05E-03	1.20E-05	
		1149	1149	1	7723140	Phosphorus	1	1.32E-01	2.24E-04	1.32E-01	2.24E-04	1.32E-01	2.24E-04	
		1149	1149	1	7440224	Silver	1	3.35E-04	5.70E-07	3.35E-04	5.70E-07	3.35E-04	5.70E-07	
		1149	1149	1	7440622	Vanadium (fume or dust)	1	6.87E-04	1.17E-06	6.87E-04	1.17E-06	6.87E-04	1.17E-06	
		1149	1149	1	7440666	Zinc	1	4.41E-01	7.50E-04	4.41E-01	7.50E-04	4.41E-01	7.50E-04	
		1149	1149	1	91203	Naphthalene [PAH, POM]	1	8.78E-03	1.49E-05	8.78E-03	1.49E-05	8.78E-03	1.49E-05	
		1149	1149	1	208968	Acenaphthylene [PAH, POM	1	5.08E-05	8.64E-08	5.08E-05	8.64E-08	5.08E-05	8.64E-08	
		1149	1149	1	83329	Acenaphthene [PAH, POM]	1	6.49E-05	1.10E-07	6.49E-05	1.10E-07	6.49E-05	1.10E-07	
		1149	1149	1	86737	Fluorene [PAH, POM]	1	2.71E-04	4.62E-07	2.71E-04	4.62E-07	2.71E-04	4.62E-07	
		1149	1149	1	85018	Phenanthrene [PAH, POM]	1	7.07E-04	1.20E-06	7.07E-04	1.20E-06	7.07E-04	1.20E-06	
		1149	1149	1	120127	Anthracene [PAH, POM]	1	8.72E-05	1.49E-07	8.72E-05	1.49E-07	8.72E-05	1.49E-07	
		1149	1149	1	206440	Fluoranthene [PAH, POM]	1	6.91E-05	1.18E-07	6.91E-05	1.18E-07	6.91E-05	1.18E-07	
		1149	1149	1	129000	Pyrene [PAH, POM]	1	7.07E-05	1.20E-07	7.07E-05	1.20E-07	7.07E-05	1.20E-07	
		1149	1149	1	218019	Chrysene [PAH, POM]	1	1.11E-05	1.89E-08	1.11E-05	1.89E-08	1.11E-05	1.89E-08	
		1149	1149	1	56553	Benz[a]anthracene [PAH, P	1	3.26E-05	5.55E-08	3.26E-05	5.55E-08	3.26E-05	5.55E-08	
		1149	1149	1	205992	Benzo[b]fluoranthene [PAH,	1	4.07E-05	6.93E-08	4.07E-05	6.93E-08	4.07E-05	6.93E-08	
		1149	1149	1	207089	Benzo[k]fluoranthene [PAH,	1	1.11E-05	1.89E-08	1.11E-05	1.89E-08	1.11E-05	1.89E-08	
		1149	1149	1	50328	Benzo[a]pyrene [PAH, POM	1	1.11E-05	1.89E-08	1.11E-05	1.89E-08	1.11E-05	1.89E-08	
		1149	1149	1	193395	Indeno[1,2,3-cd]pyrene [PA	1	1.11E-05	1.89E-08	1.11E-05	1.89E-08	1.11E-05	1.89E-08	
		1149	1149	1	53703	Dibenz[a,h]anthracene [PAH	1	1.11E-05	1.89E-08	1.11E-05	1.89E-08	1.11E-05	1.89E-08	
		1149	1149	1	191242	Benzo[g,h,i]perylene [PAH,	1	1.11E-05	1.89E-08	1.11E-05	1.89E-08	1.11E-05	1.89E-08	
Emergency Generator		1150	1150	1	9901	Diesel exhaust particulates	1	9.78E+00	0.00E+00	9.78E+00	0.00E+00	9.78E+00	0.00E+00	Emissions based on VCAPCD Emission Factors
		1150	1150	1	75070	Acetaldehyde	1	0.00E+00	1.57E-02	0.00E+00	1.57E-02	0.00E+00	1.57E-02	
		1150	1150	1	107028	Acrolein	1	0.00E+00	6.78E-04	0.00E+00	6.78E-04	0.00E+00	6.78E-04	
		1150	1150	1	7440382	Arsenic and Compounds (in	1	0.00E+00	3.20E-05	0.00E+00	3.20E-05	0.00E+00	3.20E-05	
		1150	1150	1	71432	Benzene	1	0.00E+00	3.73E-03	0.00E+00	3.73E-03	0.00E+00	3.73E-03	
		1150	1150	1	7440508	Copper	1	0.00E+00	8.20E-05	0.00E+00	8.20E-05	0.00E+00	8.20E-05	
		1150	1150	1	50000	Formaldehyde	1	0.00E+00	3.45E-02	0.00E+00	3.45E-02	0.00E+00	3.45E-02	
		1150	1150	1	7439976	Mercury	1	0.00E+00	4.00E-05	0.00E+00	4.00E-05	0.00E+00	4.00E-05	
		1150	1150	1	7440020	Nickel	1	0.00E+00	7.80E-05	0.00E+00	7.80E-05	0.00E+00	7.80E-05	
		1150	1150	1	108883	Toluene	1	0.00E+00	2.11E-03	0.00E+00	2.11E-03	0.00E+00	2.11E-03	
		1150	1150	1	1330207	Xylenes	1	0.00E+00	8.49E-04	0.00E+00	8.49E-04	0.00E+00	8.49E-04	
		1150	1150	1	106990	Butadiene [1,3]	1	0.00E+00	4.35E-03	0.00E+00	4.35E-03	0.00E+00	4.35E-03	
		1150	1150	1	7440439	Cadmium	1	0.00E+00	3.00E-05	0.00E+00	3.00E-05	0.00E+00	3.00E-05	
		1150	1150	1	108907	Chlorbenzene	1	0.00E+00	4.00E-06	0.00E+00	4.00E-06	0.00E+00	4.00E-06	
		1150	1150	1	100414	Ethyl benzene	1	0.00E+00	2.18E-04	0.00E+00	2.18E-04	0.00E+00	2.18E-04	
		1150	1150	1	110543	Hexane	1	0.00E+00	5.38E-04	0.00E+00	5.38E-04	0.00E+00	5.38E-04	
		1150	1150	1	18540299	Chromium, hexavalent (and	1	0.00E+00	2.00E-06	0.00E+00	2.00E-06	0.00E+00	2.00E-06	
		1150	1150	1	7439921	Lead compounds (inorganic	1	0.00E+00	1.66E-04	0.00E+00	1.66E-04	0.00E+00	1.66E-04	
		1150	1150	1	7439965	Manganese	1	0.00E+00	6.20E-05	0.00E+00	6.20E-05	0.00E+00	6.20E-05	
		1150	1150	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	3.94E-04	0.00E+00	3.94E-04	0.00E+00	3.94E-04	
		1150	1150	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	7.24E-04	0.00E+00	7.24E-04	0.00E+00	7.24E-04	
		1150	1150	1	115071	Propylene	1	0.00E+00	9.35E-03	0.00E+00	9.35E-03	0.00E+00	9.35E-03	
		1150	1150	1	7782492	Selenium	1	0.00E+00	4.40E-05	0.00E+00	4.40E-05	0.00E+00	4.40E-05	
		1150	1150	1	7440473	Chromium	1	0.00E+00	1.20E-05	0.00E+00	1.20E-05	0.00E+00	1.20E-05	
		1150	1150	1	7440666	Zinc	1	0.00E+00	4.48E-04	0.00E+00	4.48E-04	0.00E+00	4.48E-04	
Firewater Pump Engine		1151	1151	1	9901	Diesel exhaust particulates	1	8.59E+00	0.00E+00	1.29E+00	0.00E+00	1.29E+00	0.00E+00	Emissions based on VCAPCD Emission Factors
		1151	1151	1	75070	Acetaldehyde	1	0.00E+00	6.36E-03	0.00E+00	6.36E-03	0.00E+00	6.36E-03	
		1151	1151	1	107028	Acrolein	1	0.00E+00	2.75E-04	0.00E+00	2.75E-04	0.00E+00	2.75E-04	
		1151	1151	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.30E-05	0.00E+00	1.30E-05	0.00E+00	1.30E-05	
		1151	1151	1	71432	Benzene	1	0.00E+00	1.51E-03	0.00E+00	1.51E-03	0.00E+00	1.51E-03	
		1151	1151	1	7440508	Copper	1	0.00E+00	3.33E-05	0.00E+00	3.33E-05	0.00E+00	3.33E-05	
		1151	1151	1	50000	Formaldehyde	1	0.00E+00	1.40E-02	0.00E+00	1.40E-02	0.00E+00	1.40E-02	
		1151	1151	1	7439976	Mercury	1	0.00E+00	1.62E-05	0.00E+00	1.62E-05	0.00E+00	1.62E-05	
		1151	1151	1	7440020	Nickel	1	0.00E+00	3.16E-05	0.00E+00	3.16E-05	0.00E+00	3.16E-05	
		1151	1151	1	108883	Toluene	1	0.00E+00	8.55E-04	0.00E+00	8.55E-04	0.00E+00	8.55E-04	
		1151	1151	1	1330207	Xylenes	1	0.00E+00	3.44E-04	0.00E+00	3.44E-04	0.00E+00	3.44E-04	
		1151	1151	1	106990	Butadiene [1,3]	1	0.00E+00	1.76E-03	0.00E+00	1.76E-03	0.00E+00	1.76E-03	
		1151	1151	1	7440439	Cadmium	1	0.00E+00	1.22E-05	0.00E+00	1.22E-05	0.00E+00	1.22E-05	
		1151	1151	1	108907	Chlorbenzene	1	0.00E+00	1.62E-06	0.00E+00	1.62E-06	0.00E+00	1.62E-06	
		1151	1151	1	100414	Ethyl benzene	1	0.00E+00	8.84E-05	0.00E+00	8.84E-05	0.00E+00	8.84E-05	
		1151	1151	1	110543	Hexane	1	0.00E+00	2.18E-04	0.00E+00	2.18E-04	0.00E+00	2.18E-04	
		1151	1151	1	18540299	Chromium, hexavalent (and	1	0.00E+00	8.11E-07	0.00E+00	8.11E-07	0.00E+00	8.11E-07	
		1151	1151	1	7439921	Lead compounds (inorganic	1	0.00E+00	6.73E-05	0.00E+00	6.73E-05	0.00E+00	6.73E-05	
		1151	1151	1	7439965	Manganese	1	0.00E+00	2.52E-05	0.00E+00	2.52E-05	0.00E+00	2.52E-05	
		1151	1151	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.60E-04	0.00E+00	1.60E-04	0.00E+00	1.60E-04	
		1151	1151	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.94E-04	0.00E+00	2.94E-04	0.00E+00	2.94E-04	
		1151	1151	1	115071	Propylene	1	0.00E+00	3.79E-03	0.00E+00	3.79E-03	0.00E+00	3.79E-03	
		1151	1151	1	7782492	Selenium	1	0.00E+00	1.78E-05	0.00E+00	1.78E-05	0.00E+00	1.78E-05	
		1151	1151	1	7440473	Chromium	1	0.00E+00	4.87E-06	0.00E+00	4.87E-06	0.00E+00	4.87E-06	
		1151	1151	1	7440666	Zinc	1	0.00E+00	1.82E-04	0.00E+00	1.82E-04	0.00E+00	1.82E-04	
LPG Loading Rack		1154	1154	1	71432	Benzene	1	1.80E-04	1.08E-06	7.71E-04	1.08E-06	7.71E-04	1.08E-06	Emission Factors based on SBCAPCD Spreadsheets Part F5
		1154	1154	1	100414	Ethyl benzene	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
		1154	1154	1	110543	Hexane	1	3.71E-02	2.23E-04	1.59E-01	2.23E-04	1.59E-01	2.23E-04	
		1154	1154	1	7783064	Hydrogen sulfide	1	1.69E-05	1.02E-07	7.25E-05	1.02E-07	7.25E-05	1.02E-07	
		1154	1154	1	108883	Toluene	1	5.65E-05	3.40E-07	2.42E-04	3.40E-07	2.42E-04	3.40E-07	
		1154	1154	1	1330207	Xylenes	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Methanol Tanks		1155	1155	1	67561	Methanol	1	1.11E+02	2.83E+00	1.11E+02	2.83E+00	7.65E-01	1.90E+00	Directly copied from SBCAPCD spreadsheets
Oil Tank TK-204		1156	1156	1	71432	Benzene	1	2.09E-02	2.38E-06	7.84E-02	8.95E-06	7.84E-02	8.95E-06	Taken from tanks spreadsheets and SBCAPCD Spreadsheets Part F2
		1156	1156	1	100414	Ethyl benzene	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
		1156	1156	1	110543	Hexane	1	4.17E+00	4.76E-04	1.57E+01	1.79E-03	1.57E+01	1.79E-03	
		1156	1156	1	7783064	Hydrogen sulfide	1	1.83E-01	2.09E-05	6.89E-01	7.86E-05	6.89E-01	7.86E-05	
		1156	1156	1	108883	Toluene	1	5.32E-03	6.07E-07	2.00E-02	2.28E-06	2.00E-02	2.28E-06	
		1156	1156	1	1330207	Xylenes	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
		1156	1156	1	106467	p-Dichlorobenzene [1,4-Dich	1	3.12E-04	3.57E-08	1.17E-03	1.34E-07	1.17E-03	1.34E-07	
		1156	1156	1	67561	Methanol	1	1.70E-01	1.94E-05	6.38E-01	7.28E-05	6.38E-01	7.28E-05	
Oil Tank TK-202		1157	1157	1	71432	Benzene	1	1.44E-01	1.65E-05	4.22E-01	4.82E-05	4.22E-01	4.82E-05	Taken from tanks spreadsheets and SBCAPCD Spreadsheets Part F2
		1157	1157	1	100414	Ethyl benzene	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
		1157	1157	1	110543	Hexane	1	2.89E+01	3.30E-03	8.44E+01	9.64E-03	8.44E+01	9.64E-03	
		1157	1157	1	7783064	Hydrogen sulfide	1	1.27E+00	1.45E-04	3.71E+00	4.23E-04	3.71E+00	4.23E-04	
		1157	1157	1	108883	Toluene	1	3.68E-02	4.20E-06	1.08E-01	1.23E-05	1.08E-01	1.23E-05	
		1157	1157	1	1330207	Xylenes	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
		1157	1157	1	106467	p-Dichlorobenzene {1,4-Dicl	1	2.16E-03	2.47E-07	6.32E-03	7.21E-07	6.32E-03	7.21E-07	
		1157	1157	1	67561	Methanol	1	1.17E+00	1.34E-04	3.43E+00	3.92E-04	3.43E+00	3.92E-04	
Oil Tank TK-203		1158	1158	1	71432	Benzene	1	1.44E-01	1.65E-05	4.22E-01	4.82E-05	4.22E-01	4.82E-05	Taken from tanks spreadsheets and SBCAPCD Spreadsheets Part F2
		1158	1158	1	100414	Ethyl benzene	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
		1158	1158	1	110543	Hexane	1	2.89E+01	3.30E-03	8.44E+01	9.64E-03	8.44E+01	9.64E-03	
		1158	1158	1	7783064	Hydrogen sulfide	1	1.27E+00	1.45E-04	3.71E+00	4.23E-04	3.71E+00	4.23E-04	
		1158	1158	1	108883	Toluene	1	3.68E-02	4.20E-06	1.08E-01	1.23E-05	1.08E-01	1.23E-05	
		1158	1158	1	1330207	Xylenes	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
		1158	1158	1	106467	p-Dichlorobenzene {1,4-Dicl	1	2.16E-03	2.47E-07	6.32E-03	7.21E-07	6.32E-03	7.21E-07	
		1158	1158	1	67561	Methanol	1	1.17E+00	1.34E-04	3.43E+00	3.92E-04	3.43E+00	3.92E-04	
Wash Tank TK-201		1159	1159	1	71432	Benzene	1	4.44E-01	5.07E-05	4.44E-01	5.07E-05	4.44E-01	5.07E-05	Taken from tanks spreadsheets and SBCAPCD Spreadsheets Part F2
		1159	1159	1	108883	Toluene	1	4.16E-01	4.75E-05	4.16E-01	4.75E-05	4.16E-01	4.75E-05	
		1159	1159	1	100414	Ethyl benzene	1	1.13E-01	1.29E-05	1.13E-01	1.29E-05	1.13E-01	1.29E-05	
		1159	1159	1	1330207	Xylenes	1	8.92E-02	1.02E-05	8.92E-02	1.02E-05	8.92E-02	1.02E-05	
		1159	1159	1	110543	Hexane	1	1.91E+00	2.18E-04	1.91E+00	2.18E-04	1.91E+00	2.18E-04	
		1159	1159	1	7783064	Hydrogen sulfide	1	1.05E+01	1.20E-03	1.05E+01	1.20E-03	1.05E+01	1.20E-03	
Pig Reciever Emulsion/AAPL PL		1161	1161	1	71432	Benzene	1	3.29E-03	4.38E-05	3.29E-03	4.38E-05	3.29E-03	4.38E-05	SBCAPCD Spreadsheets Part F3
		1161	1161	1	108883	Toluene	1	3.09E-03	2.30E-05	3.09E-03	2.30E-05	3.09E-03	2.30E-05	
		1161	1161	1	100414	Ethyl benzene	1	8.40E-04	6.25E-06	8.40E-04	6.25E-06	8.40E-04	6.25E-06	
		1161	1161	1	1330207	Xylenes	1	6.64E-04	4.94E-06	6.64E-04	4.94E-06	6.64E-04	4.94E-06	
		1161	1161	1	7783064	Hydrogen sulfide	1	7.77E-02	1.15E-03	7.77E-02	1.15E-03	7.77E-02	1.15E-03	
		1161	1161	1	110543	Hexane	1	1.42E-02	1.06E-04	1.42E-02	1.06E-04	1.42E-02	1.06E-04	
Pig Receiver Gas/Utility/Seep		1162	1162	1	71432	Benzene	1	2.08E-03	9.53E-05	2.08E-03	9.53E-05	2.08E-03	9.53E-05	SBCAPCD Spreadsheets Part F3
		1162	1162	1	108883	Toluene	1	1.47E-03	2.58E-05	1.47E-03	2.58E-05	1.47E-03	2.58E-05	
		1162	1162	1	100414	Ethyl benzene	1	1.70E-04	2.99E-06	1.70E-04	2.99E-06	1.70E-04	2.99E-06	
		1162	1162	1	1330207	Xylenes	1	2.66E-04	4.68E-06	2.66E-04	4.68E-06	2.66E-04	4.68E-06	
		1162	1162	1	7783064	Hydrogen sulfide	1	9.37E-02	1.65E-03	9.37E-02	1.65E-03	9.37E-02	1.65E-03	
		1162	1162	1	110543	Hexane	1	3.78E-03	6.64E-05	3.78E-03	6.64E-05	3.78E-03	6.64E-05	
Coatings		1166	1166	1	100414	Ethyl benzene	1	5.91E+00	2.36E+00	5.91E+00	2.36E+00	5.91E+00	2.36E+00	SBCAPCD Spreadsheets Part F8
		1166	1166	1	91203	Naphthalene [PAH, POM]	1	9.46E-03	3.79E-03	9.46E-03	3.79E-03	9.46E-03	3.79E-03	
		1166	1166	1	108883	Toluene	1	4.93E+00	1.97E+00	4.93E+00	1.97E+00	4.93E+00	1.97E+00	
		1166	1166	1	95636	1,2,4-Trimethylbenzene	1	6.02E-02	2.41E-02	6.02E-02	2.41E-02	6.02E-02	2.41E-02	
		1166	1166	1	1330207	Xylenes	1	1.02E+01	4.09E+00	1.02E+01	4.09E+00	1.02E+01	4.09E+00	
		1166	1166	1	108907	Chlorbenzene	1	7.03E-03	2.81E-03	7.03E-03	2.81E-03	7.03E-03	2.81E-03	
		1166	1166	1	78933	Methyl ethyl ketone {2-Butar	1	1.25E+00	5.01E-01	1.25E+00	5.01E-01	1.25E+00	5.01E-01	
NGL Loading Rack		1170	1170	1	71432	Benzene	1	2.72E-04	4.39E-06	4.39E-06	4.39E-06	4.39E-06	4.39E-06	Emission Factors based on SBCAPCD Spreadsheets Part F5
		1170	1170	1	100414	Ethyl benzene	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
		1170	1170	1	110543	Hexane	1	7.56E-02	1.22E-03	1.22E-03	1.22E-03	1.22E-03	1.22E-03	
		1170	1170	1	7783064	Hydrogen sulfide	1	3.62E-02	5.83E-04	5.83E-04	5.83E-04	5.83E-04	5.83E-04	
		1170	1170	1	108883	Toluene	1	4.12E-05	6.65E-07	6.65E-07	6.65E-07	6.65E-07	6.65E-07	
		1170	1170	1	1330207	Xylenes	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Solvent Usage		2001	2001	1	100414	Ethyl benzene	1	4.41E-01	2.27E-02	4.41E-01	2.27E-02	4.41E-01	2.27E-02	SBCAPCD Spreadsheets Part F8
		2001	2001	1	91203	Naphthalene [PAH, POM]	1	4.41E-01	2.27E-02	4.41E-01	2.27E-02	4.41E-01	2.27E-02	
		2001	2001	1	108883	Toluene	1	6.30E-01	3.25E-02	6.30E-01	3.25E-02	6.30E-01	3.25E-02	
		2001	2001	1	95636	1,2,4-Trimethylbenzene	1	2.81E+00	1.45E-01	2.81E+00	1.45E-01	2.81E+00	1.45E-01	
		2001	2001	1	1330207	Xylenes	1	4.82E+00	2.48E-01	4.82E+00	2.48E-01	4.82E+00	2.48E-01	
		2001	2001	1	108907	Chlorbenzene	1	3.28E-01	1.69E-02	3.28E-01	1.69E-02	3.28E-01	1.69E-02	
		2001	2001	1	78933	Methyl ethyl ketone {2-Butar	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Pig Cleaning		2002	2002	1	100414	Ethyl benzene	1	1.24E-02	2.27E-03	1.24E-02	2.27E-03	1.24E-02	2.27E-03	SBCAPCD Spreadsheets Part F8
		2002	2002	1	91203	Naphthalene [PAH, POM]	1	1.24E-02	2.27E-03	1.24E-02	2.27E-03	1.24E-02	2.27E-03	
		2002	2002	1	108883	Toluene	1	1.78E-02	3.25E-03	1.78E-02	3.25E-03	1.78E-02	3.25E-03	
		2002	2002	1	95636	1,2,4-Trimethylbenzene	1	7.93E-02	1.45E-02	7.93E-02	1.45E-02	7.93E-02	1.45E-02	
		2002	2002	1	1330207	Xylenes	1	1.36E-01	2.48E-02	1.36E-01	2.48E-02	1.36E-01	2.48E-02	
		2002	2002	1	108907	Chlorbenzene	1	9.25E-03	1.69E-03	9.25E-03	1.69E-03	9.25E-03	1.69E-03	
		2002	2002	1	78933	Methyl ethyl ketone {2-Butar	1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Trucks1		3000	3000	1	9901	Diesel exhaust particulates	1	1.77E-01	0.00E+00	2.49E-01	0.00E+00	2.49E-01	0.00E+00	Emissions based on VCAPCD Emission Factors
		3000	3000	1	75070	Acetaldehyde	1	0.00E+00	4.01E-05	0.00E+00	4.01E-05	0.00E+00	4.01E-05	
		3000	3000	1	107028	Acrolein	1	0.00E+00	1.74E-06	0.00E+00	1.74E-06	0.00E+00	1.74E-06	
		3000	3000	1	7440382	Arsenic and Compounds (in	1	0.00E+00	8.19E-08	0.00E+00	8.19E-08	0.00E+00	8.19E-08	
		3000	3000	1	71432	Benzene	1	0.00E+00	9.54E-06	0.00E+00	9.54E-06	0.00E+00	9.54E-06	
		3000	3000	1	7440508	Copper	1	0.00E+00	2.10E-07	0.00E+00	2.10E-07	0.00E+00	2.10E-07	
		3000	3000	1	50000	Formaldehyde	1	0.00E+00	8.84E-05	0.00E+00	8.84E-05	0.00E+00	8.84E-05	
		3000	3000	1	7439976	Mercury	1	0.00E+00	1.02E-07	0.00E+00	1.02E-07	0.00E+00	1.02E-07	
		3000	3000	1	7440020	Nickel	1	0.00E+00	2.00E-07	0.00E+00	2.00E-07	0.00E+00	2.00E-07	
		3000	3000	1	108883	Toluene	1	0.00E+00	5.40E-06	0.00E+00	5.40E-06	0.00E+00	5.40E-06	
		3000	3000	1	1330207	Xylenes	1	0.00E+00	2.17E-06	0.00E+00	2.17E-06	0.00E+00	2.17E-06	
		3000	3000	1	106990	Butadiene [1,3]	1	0.00E+00	1.11E-05	0.00E+00	1.11E-05	0.00E+00	1.11E-05	
		3000	3000	1	7440439	Cadmium	1	0.00E+00	7.68E-08	0.00E+00	7.68E-08	0.00E+00	7.68E-08	
		3000	3000	1	108907	Chlorbenzene	1	0.00E+00	1.02E-08	0.00E+00	1.02E-08	0.00E+00	1.02E-08	
		3000	3000	1	100414	Ethyl benzene	1	0.00E+00	5.58E-07	0.00E+00	5.58E-07	0.00E+00	5.58E-07	
		3000	3000	1	110543	Hexane	1	0.00E+00	1.38E-06	0.00E+00	1.38E-06	0.00E+00	1.38E-06	
		3000	3000	1	18540299	Chromium, hexavalent (and	1	0.00E+00	5.12E-09	0.00E+00	5.12E-09	0.00E+00	5.12E-09	
		3000	3000	1	7439921	Lead compounds (inorganic	1	0.00E+00	4.25E-07	0.00E+00	4.25E-07	0.00E+00	4.25E-07	
		3000	3000	1	7439965	Manganese	1	0.00E+00	1.59E-07	0.00E+00	1.59E-07	0.00E+00	1.59E-07	
		3000	3000	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.01E-06	0.00E+00	1.01E-06	0.00E+00	1.01E-06	
		3000	3000	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	1.85E-06	0.00E+00	1.85E-06	0.00E+00	1.85E-06	
		3000	3000	1	115071	Propylene	1	0.00E+00	2.39E-05	0.00E+00	2.39E-05	0.00E+00	2.39E-05	
		3000	3000	1	7782492	Selenium	1	0.00E+00	1.13E-07	0.00E+00	1.13E-07	0.00E+00	1.13E-07	
		3000	3000	1	7440473	Chromium	1	0.00E+00	3.07E-08	0.00E+00	3.07E-08	0.00E+00	3.07E-08	
		3000	3000	1	7440666	Zinc	1	0.00E+00	1.15E-06	0.00E+00	1.15E-06	0.00E+00	1.15E-06	
Trucks2		3001	3001	1	9901	Diesel exhaust particulates	1	3.43E-02	0.00E+00	4.84E-02	0.00E+00	4.84E-02	0.00E+00	Emissions based on VCAPCD Emission Factors
		3001	3001	1	75070	Acetaldehyde	1	0.00E+00	7.79E-06	0.00E+00	7.79E-06	0.00E+00	7.79E-06	
		3001	3001	1	107028	Acrolein	1	0.00E+00	3.37E-07	0.00E+00	3.37E-07	0.00E+00	3.37E-07	
		3001	3001	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.59E-08	0.00E+00	1.59E-08	0.00E+00	1.59E-08	
		3001	3001	1	71432	Benzene	1	0.00E+00	1.85E-06	0.00E+00	1.85E-06	0.00E+00	1.85E-06	
		3001	3001	1	7440508	Copper	1	0.00E+00	4.08E-08	0.00E+00	4.08E-08	0.00E+00	4.08E-08	
		3001	3001	1	50000	Formaldehyde	1	0.00E+00	1.72E-05	0.00E+00	1.72E-05	0.00E+00	1.72E-05	
		3001	3001	1	7439976	Mercury	1	0.00E+00	1.99E-08	0.00E+00	1.99E-08	0.00E+00	1.99E-08	
		3001	3001	1	7440020	Nickel	1	0.00E+00	3.88E-08	0.00E+00	3.88E-08	0.00E+00	3.88E-08	
		3001	3001	1	108883	Toluene	1	0.00E+00	1.05E-06	0.00E+00	1.05E-06	0.00E+00	1.05E-06	
		3001	3001	1	1330207	Xylenes	1	0.00E+00	4.22E-07	0.00E+00	4.22E-07	0.00E+00	4.22E-07	
		3001	3001	1	106990	Butadiene [1,3]	1	0.00E+00	2.16E-06	0.00E+00	2.16E-06	0.00E+00	2.16E-06	
		3001	3001	1	7440439	Cadmium	1	0.00E+00	1.49E-08	0.00E+00	1.49E-08	0.00E+00	1.49E-08	
		3001	3001	1	108907	Chlorbenzene	1	0.00E+00	1.99E-09	0.00E+00	1.99E-09	0.00E+00	1.99E-09	
		3001	3001	1	100414	Ethyl benzene	1	0.00E+00	1.08E-07	0.00E+00	1.08E-07	0.00E+00	1.08E-07	
		3001	3001	1	110543	Hexane	1	0.00E+00	2.67E-07	0.00E+00	2.67E-07	0.00E+00	2.67E-07	
		3001	3001	1	18540299	Chromium, hexavalent (and	1	0.00E+00	9.94E-10	0.00E+00	9.94E-10	0.00E+00	9.94E-10	
		3001	3001	1	7439921	Lead compounds (inorganic	1	0.00E+00	8.25E-08	0.00E+00	8.25E-08	0.00E+00	8.25E-08	
		3001	3001	1	7439965	Manganese	1	0.00E+00	3.08E-08	0.00E+00	3.08E-08	0.00E+00	3.08E-08	
		3001	3001	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.96E-07	0.00E+00	1.96E-07	0.00E+00	1.96E-07	
		3001	3001	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	3.60E-07	0.00E+00	3.60E-07	0.00E+00	3.60E-07	
		3001	3001	1	115071	Propylene	1	0.00E+00	4.64E-06	0.00E+00	4.64E-06	0.00E+00	4.64E-06	
		3001	3001	1	7782492	Selenium	1	0.00E+00	2.19E-08	0.00E+00	2.19E-08	0.00E+00	2.19E-08	
		3001	3001	1	7440473	Chromium	1	0.00E+00	5.97E-09	0.00E+00	5.97E-09	0.00E+00	5.97E-09	
		3001	3001	1	7440666	Zinc	1	0.00E+00	2.23E-07	0.00E+00	2.23E-07	0.00E+00	2.23E-07	
Trucks3		3002	3002	1	9901	Diesel exhaust particulates	1	3.79E-01	0.00E+00	5.35E-01	0.00E+00	5.35E-01	0.00E+00	Emissions based on VCAPCD Emission Factors
		3002	3002	1	75070	Acetaldehyde	1	0.00E+00	8.61E-05	0.00E+00	8.61E-05	0.00E+00	8.61E-05	
		3002	3002	1	107028	Acrolein	1	0.00E+00	3.72E-06	0.00E+00	3.72E-06	0.00E+00	3.72E-06	
		3002	3002	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.76E-07	0.00E+00	1.76E-07	0.00E+00	1.76E-07	
		3002	3002	1	71432	Benzene	1	0.00E+00	2.05E-05	0.00E+00	2.05E-05	0.00E+00	2.05E-05	
		3002	3002	1	7440508	Copper	1	0.00E+00	4.50E-07	0.00E+00	4.50E-07	0.00E+00	4.50E-07	
		3002	3002	1	50000	Formaldehyde	1	0.00E+00	1.90E-04	0.00E+00	1.90E-04	0.00E+00	1.90E-04	
		3002	3002	1	7439976	Mercury	1	0.00E+00	2.20E-07	0.00E+00	2.20E-07	0.00E+00	2.20E-07	
		3002	3002	1	7440020	Nickel	1	0.00E+00	4.28E-07	0.00E+00	4.28E-07	0.00E+00	4.28E-07	
		3002	3002	1	108883	Toluene	1	0.00E+00	1.16E-05	0.00E+00	1.16E-05	0.00E+00	1.16E-05	
		3002	3002	1	1330207	Xylenes	1	0.00E+00	4.66E-06	0.00E+00	4.66E-06	0.00E+00	4.66E-06	
		3002	3002	1	106990	Butadiene [1,3]	1	0.00E+00	2.39E-05	0.00E+00	2.39E-05	0.00E+00	2.39E-05	
		3002	3002	1	7440439	Cadmium	1	0.00E+00	1.65E-07	0.00E+00	1.65E-07	0.00E+00	1.65E-07	
		3002	3002	1	108907	Chlorbenzene	1	0.00E+00	2.20E-08	0.00E+00	2.20E-08	0.00E+00	2.20E-08	
		3002	3002	1	100414	Ethyl benzene	1	0.00E+00	1.20E-06	0.00E+00	1.20E-06	0.00E+00	1.20E-06	
		3002	3002	1	110543	Hexane	1	0.00E+00	2.96E-06	0.00E+00	2.96E-06	0.00E+00	2.96E-06	
		3002	3002	1	18540299	Chromium, hexavalent (and	1	0.00E+00	1.10E-08	0.00E+00	1.10E-08	0.00E+00	1.10E-08	
		3002	3002	1	7439921	Lead compounds (inorganic	1	0.00E+00	9.12E-07	0.00E+00	9.12E-07	0.00E+00	9.12E-07	
		3002	3002	1	7439965	Manganese	1	0.00E+00	3.41E-07	0.00E+00	3.41E-07	0.00E+00	3.41E-07	
		3002	3002	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	2.16E-06	0.00E+00	2.16E-06	0.00E+00	2.16E-06	
		3002	3002	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	3.98E-06	0.00E+00	3.98E-06	0.00E+00	3.98E-06	
		3002	3002	1	115071	Propylene	1	0.00E+00	5.13E-05	0.00E+00	5.13E-05	0.00E+00	5.13E-05	
		3002	3002	1	7782492	Selenium	1	0.00E+00	2.42E-07	0.00E+00	2.42E-07	0.00E+00	2.42E-07	
		3002	3002	1	7440473	Chromium	1	0.00E+00	6.59E-08	0.00E+00	6.59E-08	0.00E+00	6.59E-08	
		3002	3002	1	7440666	Zinc	1	0.00E+00	2.46E-06	0.00E+00	2.46E-06	0.00E+00	2.46E-06	
Trucks4		3003	3003	1	9901	Diesel exhaust particulates	1	3.64E-01	0.00E+00	5.13E-01	0.00E+00	5.13E-01	0.00E+00	Emissions based on VCAPCD Emission Factors
		3003	3003	1	75070	Acetaldehyde	1	0.00E+00	8.25E-05	0.00E+00	8.25E-05	0.00E+00	8.25E-05	
		3003	3003	1	107028	Acrolein	1	0.00E+00	3.57E-06	0.00E+00	3.57E-06	0.00E+00	3.57E-06	
		3003	3003	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.69E-07	0.00E+00	1.69E-07	0.00E+00	1.69E-07	
		3003	3003	1	71432	Benzene	1	0.00E+00	1.96E-05	0.00E+00	1.96E-05	0.00E+00	1.96E-05	
		3003	3003	1	7440508	Copper	1	0.00E+00	4.32E-07	0.00E+00	4.32E-07	0.00E+00	4.32E-07	
		3003	3003	1	50000	Formaldehyde	1	0.00E+00	1.82E-04	0.00E+00	1.82E-04	0.00E+00	1.82E-04	
		3003	3003	1	7439976	Mercury	1	0.00E+00	2.11E-07	0.00E+00	2.11E-07	0.00E+00	2.11E-07	
		3003	3003	1	7440020	Nickel	1	0.00E+00	4.11E-07	0.00E+00	4.11E-07	0.00E+00	4.11E-07	
		3003	3003	1	108883	Toluene	1	0.00E+00	1.11E-05	0.00E+00	1.11E-05	0.00E+00	1.11E-05	

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
		3003	3003	1	1330207	Xylenes	1	0.00E+00	4.47E-06	0.00E+00	4.47E-06	0.00E+00	4.47E-06	
		3003	3003	1	106990	Butadiene [1,3]	1	0.00E+00	2.29E-05	0.00E+00	2.29E-05	0.00E+00	2.29E-05	
		3003	3003	1	7440439	Cadmium	1	0.00E+00	1.58E-07	0.00E+00	1.58E-07	0.00E+00	1.58E-07	
		3003	3003	1	108907	Chlorbenzene	1	0.00E+00	2.11E-08	0.00E+00	2.11E-08	0.00E+00	2.11E-08	
		3003	3003	1	100414	Ethyl benzene	1	0.00E+00	1.15E-06	0.00E+00	1.15E-06	0.00E+00	1.15E-06	
		3003	3003	1	110543	Hexane	1	0.00E+00	2.83E-06	0.00E+00	2.83E-06	0.00E+00	2.83E-06	
		3003	3003	1	18540299	Chromium, hexavalent (and	1	0.00E+00	1.05E-08	0.00E+00	1.05E-08	0.00E+00	1.05E-08	
		3003	3003	1	7439921	Lead compounds (inorganic	1	0.00E+00	8.75E-07	0.00E+00	8.75E-07	0.00E+00	8.75E-07	
		3003	3003	1	7439965	Manganese	1	0.00E+00	3.27E-07	0.00E+00	3.27E-07	0.00E+00	3.27E-07	
		3003	3003	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	2.08E-06	0.00E+00	2.08E-06	0.00E+00	2.08E-06	
		3003	3003	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	3.81E-06	0.00E+00	3.81E-06	0.00E+00	3.81E-06	
		3003	3003	1	115071	Propylene	1	0.00E+00	4.92E-05	0.00E+00	4.92E-05	0.00E+00	4.92E-05	
		3003	3003	1	7782492	Selenium	1	0.00E+00	2.32E-07	0.00E+00	2.32E-07	0.00E+00	2.32E-07	
		3003	3003	1	7440473	Chromium	1	0.00E+00	6.32E-08	0.00E+00	6.32E-08	0.00E+00	6.32E-08	
		3003	3003	1	7440666	Zinc	1	0.00E+00	2.36E-06	0.00E+00	2.36E-06	0.00E+00	2.36E-06	
Trucks5		3004	3004	1	9901	Diesel exhaust particulates	1	2.09E-01	0.00E+00	2.95E-01	0.00E+00	2.95E-01	0.00E+00	Emissions based on VCAPCD Emission Factors
		3004	3004	1	75070	Acetaldehyde	1	0.00E+00	4.75E-05	0.00E+00	4.75E-05	0.00E+00	4.75E-05	
		3004	3004	1	107028	Acrolein	1	0.00E+00	2.06E-06	0.00E+00	2.06E-06	0.00E+00	2.06E-06	
		3004	3004	1	7440382	Arsenic and Compounds (in	1	0.00E+00	9.70E-08	0.00E+00	9.70E-08	0.00E+00	9.70E-08	
		3004	3004	1	71432	Benzene	1	0.00E+00	1.13E-05	0.00E+00	1.13E-05	0.00E+00	1.13E-05	
		3004	3004	1	7440508	Copper	1	0.00E+00	2.49E-07	0.00E+00	2.49E-07	0.00E+00	2.49E-07	
		3004	3004	1	50000	Formaldehyde	1	0.00E+00	1.05E-04	0.00E+00	1.05E-04	0.00E+00	1.05E-04	
		3004	3004	1	7439976	Mercury	1	0.00E+00	1.21E-07	0.00E+00	1.21E-07	0.00E+00	1.21E-07	
		3004	3004	1	7440020	Nickel	1	0.00E+00	2.37E-07	0.00E+00	2.37E-07	0.00E+00	2.37E-07	
		3004	3004	1	108883	Toluene	1	0.00E+00	6.39E-06	0.00E+00	6.39E-06	0.00E+00	6.39E-06	
		3004	3004	1	1330207	Xylenes	1	0.00E+00	2.57E-06	0.00E+00	2.57E-06	0.00E+00	2.57E-06	
		3004	3004	1	106990	Butadiene [1,3]	1	0.00E+00	1.32E-05	0.00E+00	1.32E-05	0.00E+00	1.32E-05	
		3004	3004	1	7440439	Cadmium	1	0.00E+00	9.10E-08	0.00E+00	9.10E-08	0.00E+00	9.10E-08	
		3004	3004	1	108907	Chlorbenzene	1	0.00E+00	1.21E-08	0.00E+00	1.21E-08	0.00E+00	1.21E-08	
		3004	3004	1	100414	Ethyl benzene	1	0.00E+00	6.61E-07	0.00E+00	6.61E-07	0.00E+00	6.61E-07	
		3004	3004	1	110543	Hexane	1	0.00E+00	1.63E-06	0.00E+00	1.63E-06	0.00E+00	1.63E-06	
		3004	3004	1	18540299	Chromium, hexavalent (and	1	0.00E+00	6.06E-09	0.00E+00	6.06E-09	0.00E+00	6.06E-09	
		3004	3004	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.03E-07	0.00E+00	5.03E-07	0.00E+00	5.03E-07	
		3004	3004	1	7439965	Manganese	1	0.00E+00	1.88E-07	0.00E+00	1.88E-07	0.00E+00	1.88E-07	
		3004	3004	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.19E-06	0.00E+00	1.19E-06	0.00E+00	1.19E-06	
		3004	3004	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.20E-06	0.00E+00	2.20E-06	0.00E+00	2.20E-06	
		3004	3004	1	115071	Propylene	1	0.00E+00	2.83E-05	0.00E+00	2.83E-05	0.00E+00	2.83E-05	
		3004	3004	1	7782492	Selenium	1	0.00E+00	1.33E-07	0.00E+00	1.33E-07	0.00E+00	1.33E-07	
		3004	3004	1	7440473	Chromium	1	0.00E+00	3.64E-08	0.00E+00	3.64E-08	0.00E+00	3.64E-08	
		3004	3004	1	7440666	Zinc	1	0.00E+00	1.36E-06	0.00E+00	1.36E-06	0.00E+00	1.36E-06	
Trucks6		3005	3005	1	9901	Diesel exhaust particulates	1	2.20E-01	0.00E+00	3.10E-01	0.00E+00	3.10E-01	0.00E+00	Emissions based on VCAPCD Emission Factors
		3005	3005	1	75070	Acetaldehyde	1	0.00E+00	4.98E-05	0.00E+00	4.98E-05	0.00E+00	4.98E-05	
		3005	3005	1	107028	Acrolein	1	0.00E+00	2.16E-06	0.00E+00	2.16E-06	0.00E+00	2.16E-06	
		3005	3005	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.02E-07	0.00E+00	1.02E-07	0.00E+00	1.02E-07	
		3005	3005	1	71432	Benzene	1	0.00E+00	1.19E-05	0.00E+00	1.19E-05	0.00E+00	1.19E-05	
		3005	3005	1	7440508	Copper	1	0.00E+00	2.61E-07	0.00E+00	2.61E-07	0.00E+00	2.61E-07	
		3005	3005	1	50000	Formaldehyde	1	0.00E+00	1.10E-04	0.00E+00	1.10E-04	0.00E+00	1.10E-04	
		3005	3005	1	7439976	Mercury	1	0.00E+00	1.27E-07	0.00E+00	1.27E-07	0.00E+00	1.27E-07	
		3005	3005	1	7440020	Nickel	1	0.00E+00	2.48E-07	0.00E+00	2.48E-07	0.00E+00	2.48E-07	
		3005	3005	1	108883	Toluene	1	0.00E+00	6.71E-06	0.00E+00	6.71E-06	0.00E+00	6.71E-06	
		3005	3005	1	1330207	Xylenes	1	0.00E+00	2.70E-06	0.00E+00	2.70E-06	0.00E+00	2.70E-06	
		3005	3005	1	106990	Butadiene [1,3]	1	0.00E+00	1.38E-05	0.00E+00	1.38E-05	0.00E+00	1.38E-05	
		3005	3005	1	7440439	Cadmium	1	0.00E+00	9.54E-08	0.00E+00	9.54E-08	0.00E+00	9.54E-08	
		3005	3005	1	108907	Chlorbenzene	1	0.00E+00	1.27E-08	0.00E+00	1.27E-08	0.00E+00	1.27E-08	
		3005	3005	1	100414	Ethyl benzene	1	0.00E+00	6.94E-07	0.00E+00	6.94E-07	0.00E+00	6.94E-07	
		3005	3005	1	110543	Hexane	1	0.00E+00	1.71E-06	0.00E+00	1.71E-06	0.00E+00	1.71E-06	
		3005	3005	1	18540299	Chromium, hexavalent (and	1	0.00E+00	6.36E-09	0.00E+00	6.36E-09	0.00E+00	6.36E-09	
		3005	3005	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.28E-07	0.00E+00	5.28E-07	0.00E+00	5.28E-07	
		3005	3005	1	7439965	Manganese	1	0.00E+00	1.97E-07	0.00E+00	1.97E-07	0.00E+00	1.97E-07	
		3005	3005	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.25E-06	0.00E+00	1.25E-06	0.00E+00	1.25E-06	
		3005	3005	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.30E-06	0.00E+00	2.30E-06	0.00E+00	2.30E-06	
		3005	3005	1	115071	Propylene	1	0.00E+00	2.97E-05	0.00E+00	2.97E-05	0.00E+00	2.97E-05	
		3005	3005	1	7782492	Selenium	1	0.00E+00	1.40E-07	0.00E+00	1.40E-07	0.00E+00	1.40E-07	
		3005	3005	1	7440473	Chromium	1	0.00E+00	3.82E-08	0.00E+00	3.82E-08	0.00E+00	3.82E-08	
		3005	3005	1	7440666	Zinc	1	0.00E+00	1.43E-06	0.00E+00	1.43E-06	0.00E+00	1.43E-06	
BoatsCrew1		4000	4000	1	9901	Diesel exhaust particulates	1	1.52E+02	0.00E+00	1.59E+02	0.00E+00	9.52E+01	0.00E+00	Emissions based on VCAPCD Emission Factors
		4000	4000	1	75070	Acetaldehyde	1	0.00E+00	5.82E-03	0.00E+00	5.82E-03	0.00E+00	3.49E-03	based on drilling 36 wells over 30 years, 6 of them LLA wells
		4000	4000	1	107028	Acrolein	1	0.00E+00	2.52E-04	0.00E+00	2.52E-04	0.00E+00	1.51E-04	(average of 1.2 redrills per year)
		4000	4000	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.19E-05	0.00E+00	1.19E-05	0.00E+00	7.13E-06	with increase in crew boat trips during drilling of 15%
		4000	4000	1	71432	Benzene	1	0.00E+00	1.38E-03	0.00E+00	1.38E-03	0.00E+00	8.30E-04	
		4000	4000	1	7440508	Copper	1	0.00E+00	3.05E-05	0.00E+00	3.05E-05	0.00E+00	1.83E-05	
		4000	4000	1	50000	Formaldehyde	1	0.00E+00	1.28E-02	0.00E+00	1.28E-02	0.00E+00	7.69E-03	
		4000	4000	1	7439976	Mercury	1	0.00E+00	1.49E-05	0.00E+00	1.49E-05	0.00E+00	8.91E-06	
		4000	4000	1	7440020	Nickel	1	0.00E+00	2.90E-05	0.00E+00	2.90E-05	0.00E+00	1.74E-05	
		4000	4000	1	108883	Toluene	1	0.00E+00	7.83E-04	0.00E+00	7.83E-04	0.00E+00	4.70E-04	
		4000	4000	1	1330207	Xylenes	1	0.00E+00	3.15E-04	0.00E+00	3.15E-04	0.00E+00	1.89E-04	
		4000	4000	1	106990	Butadiene [1,3]	1	0.00E+00	1.61E-03	0.00E+00	1.61E-03	0.00E+00	9.69E-04	
		4000	4000	1	7440439	Cadmium	1	0.00E+00	1.11E-05	0.00E+00	1.11E-05	0.00E+00	6.68E-06	
		4000	4000	1	108907	Chlorbenzene	1	0.00E+00	1.49E-06	0.00E+00	1.49E-06	0.00E+00	8.91E-07	
		4000	4000	1	100414	Ethyl benzene	1	0.00E+00	8.10E-05	0.00E+00	8.10E-05	0.00E+00	4.86E-05	
		4000	4000	1	110543	Hexane	1	0.00E+00	2.00E-04	0.00E+00	2.00E-04	0.00E+00	1.20E-04	
		4000	4000	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.43E-07	0.00E+00	7.43E-07	0.00E+00	4.46E-07	
		4000	4000	1	7439921	Lead compounds (inorganic	1	0.00E+00	6.16E-05	0.00E+00	6.16E-05	0.00E+00	3.70E-05	
		4000	4000	1	7439965	Manganese	1	0.00E+00	2.30E-05	0.00E+00	2.30E-05	0.00E+00	1.38E-05	
		4000	4000	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.46E-04	0.00E+00	1.46E-04	0.00E+00	8.78E-05	
		4000	4000	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.69E-04	0.00E+00	2.69E-04	0.00E+00	1.61E-04	
		4000	4000	1	115071	Propylene	1	0.00E+00	3.47E-03	0.00E+00	3.47E-03	0.00E+00	2.08E-03	
		4000	4000	1	7782492	Selenium	1	0.00E+00	1.63E-05	0.00E+00	1.63E-05	0.00E+00	9.80E-06	
		4000	4000	1	7440473	Chromium	1	0.00E+00	4.46E-06	0.00E+00	4.46E-06	0.00E+00	2.67E-06	
		4000	4000	1	7440666	Zinc	1	0.00E+00	1.66E-04	0.00E+00	1.66E-04	0.00E+00	9.98E-05	
BoatsCrew2		4001	4001	1	9901	Diesel exhaust particulates	1	1.52E+02	0.00E+00	1.59E+02	0.00E+00	9.52E+01	0.00E+00	
		4001	4001	1	75070	Acetaldehyde	1	0.00E+00	5.82E-03	0.00E+00	5.82E-03	0.00E+00	3.49E-03	
		4001	4001	1	107028	Acrolein	1	0.00E+00	2.52E-04	0.00E+00	2.52E-04	0.00E+00	1.51E-04	
		4001	4001	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.19E-05	0.00E+00	1.19E-05	0.00E+00	7.13E-06	
		4001	4001	1	71432	Benzene	1	0.00E+00	1.38E-03	0.00E+00	1.38E-03	0.00E+00	8.30E-04	
		4001	4001	1	7440508	Copper	1	0.00E+00	3.05E-05	0.00E+00	3.05E-05	0.00E+00	1.83E-05	
		4001	4001	1	50000	Formaldehyde	1	0.00E+00	1.28E-02	0.00E+00	1.28E-02	0.00E+00	7.69E-03	
		4001	4001	1	7439976	Mercury	1	0.00E+00	1.49E-05	0.00E+00	1.49E-05	0.00E+00	8.91E-06	
		4001	4001	1	7440020	Nickel	1	0.00E+00	2.90E-05	0.00E+00	2.90E-05	0.00E+00	1.74E-05	
		4001	4001	1	108883	Toluene	1	0.00E+00	7.83E-04	0.00E+00	7.83E-04	0.00E+00	4.70E-04	
		4001	4001	1	1330207	Xylenes	1	0.00E+00	3.15E-04	0.00E+00	3.15E-04	0.00E+00	1.89E-04	
		4001	4001	1	106990	Butadiene [1,3]	1	0.00E+00	1.61E-03	0.00E+00	1.61E-03	0.00E+00	9.69E-04	
		4001	4001	1	7440439	Cadmium	1	0.00E+00	1.11E-05	0.00E+00	1.11E-05	0.00E+00	6.68E-06	
		4001	4001	1	108907	Chlorbenzene	1	0.00E+00	1.49E-06	0.00E+00	1.49E-06	0.00E+00	8.91E-07	
		4001	4001	1	100414	Ethyl benzene	1	0.00E+00	8.10E-05	0.00E+00	8.10E-05	0.00E+00	4.86E-05	
		4001	4001	1	110543	Hexane	1	0.00E+00	2.00E-04	0.00E+00	2.00E-04	0.00E+00	1.20E-04	
		4001	4001	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.43E-07	0.00E+00	7.43E-07	0.00E+00	4.46E-07	
		4001	4001	1	7439921	Lead compounds (inorganic	1	0.00E+00	6.16E-05	0.00E+00	6.16E-05	0.00E+00	3.70E-05	
		4001	4001	1	7439965	Manganese	1	0.00E+00	2.30E-05	0.00E+00	2.30E-05	0.00E+00	1.38E-05	
		4001	4001	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.46E-04	0.00E+00	1.46E-04	0.00E+00	8.78E-05	
		4001	4001	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.69E-04	0.00E+00	2.69E-04	0.00E+00	1.61E-04	
		4001	4001	1	115071	Propylene	1	0.00E+00	3.47E-03	0.00E+00	3.47E-03	0.00E+00	2.08E-03	
		4001	4001	1	7782492	Selenium	1	0.00E+00	1.63E-05	0.00E+00	1.63E-05	0.00E+00	9.80E-06	
		4001	4001	1	7440473	Chromium	1	0.00E+00	4.46E-06	0.00E+00	4.46E-06	0.00E+00	2.67E-06	
		4001	4001	1	7440666	Zinc	1	0.00E+00	1.66E-04	0.00E+00	1.66E-04	0.00E+00	9.98E-05	
BoatsCrew3		4002	4002	1	9901	Diesel exhaust particulates	1	1.52E+02	0.00E+00	1.59E+02	0.00E+00	9.52E+01	0.00E+00	
		4002	4002	1	75070	Acetaldehyde	1	0.00E+00	5.82E-03	0.00E+00	5.82E-03	0.00E+00	3.49E-03	
		4002	4002	1	107028	Acrolein	1	0.00E+00	2.52E-04	0.00E+00	2.52E-04	0.00E+00	1.51E-04	
		4002	4002	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.19E-05	0.00E+00	1.19E-05	0.00E+00	7.13E-06	
		4002	4002	1	71432	Benzene	1	0.00E+00	1.38E-03	0.00E+00	1.38E-03	0.00E+00	8.30E-04	
		4002	4002	1	7440508	Copper	1	0.00E+00	3.05E-05	0.00E+00	3.05E-05	0.00E+00	1.83E-05	
		4002	4002	1	50000	Formaldehyde	1	0.00E+00	1.28E-02	0.00E+00	1.28E-02	0.00E+00	7.69E-03	
		4002	4002	1	7439976	Mercury	1	0.00E+00	1.49E-05	0.00E+00	1.49E-05	0.00E+00	8.91E-06	
		4002	4002	1	7440020	Nickel	1	0.00E+00	2.90E-05	0.00E+00	2.90E-05	0.00E+00	1.74E-05	
		4002	4002	1	108883	Toluene	1	0.00E+00	7.83E-04	0.00E+00	7.83E-04	0.00E+00	4.70E-04	
		4002	4002	1	1330207	Xylenes	1	0.00E+00	3.15E-04	0.00E+00	3.15E-04	0.00E+00	1.89E-04	
		4002	4002	1	106990	Butadiene [1,3]	1	0.00E+00	1.61E-03	0.00E+00	1.61E-03	0.00E+00	9.69E-04	
		4002	4002	1	7440439	Cadmium	1	0.00E+00	1.11E-05	0.00E+00	1.11E-05	0.00E+00	6.68E-06	
		4002	4002	1	108907	Chlorbenzene	1	0.00E+00	1.49E-06	0.00E+00	1.49E-06	0.00E+00	8.91E-07	
		4002	4002	1	100414	Ethyl benzene	1	0.00E+00	8.10E-05	0.00E+00	8.10E-05	0.00E+00	4.86E-05	
		4002	4002	1	110543	Hexane	1	0.00E+00	2.00E-04	0.00E+00	2.00E-04	0.00E+00	1.20E-04	
		4002	4002	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.43E-07	0.00E+00	7.43E-07	0.00E+00	4.46E-07	
		4002	4002	1	7439921	Lead compounds (inorganic	1	0.00E+00	6.16E-05	0.00E+00	6.16E-05	0.00E+00	3.70E-05	
		4002	4002	1	7439965	Manganese	1	0.00E+00	2.30E-05	0.00E+00	2.30E-05	0.00E+00	1.38E-05	
		4002	4002	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.46E-04	0.00E+00	1.46E-04	0.00E+00	8.78E-05	
		4002	4002	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.69E-04	0.00E+00	2.69E-04	0.00E+00	1.61E-04	
		4002	4002	1	115071	Propylene	1	0.00E+00	3.47E-03	0.00E+00	3.47E-03	0.00E+00	2.08E-03	
		4002	4002	1	7782492	Selenium	1	0.00E+00	1.63E-05	0.00E+00	1.63E-05	0.00E+00	9.80E-06	
		4002	4002	1	7440473	Chromium	1	0.00E+00	4.46E-06	0.00E+00	4.46E-06	0.00E+00	2.67E-06	
		4002	4002	1	7440666	Zinc	1	0.00E+00	1.66E-04	0.00E+00	1.66E-04	0.00E+00	9.98E-05	
BoatsCrew4		4003	4003	1	9901	Diesel exhaust particulates	1	1.52E+02	0.00E+00	1.59E+02	0.00E+00	9.52E+01	0.00E+00	
		4003	4003	1	75070	Acetaldehyde	1	0.00E+00	5.82E-03	0.00E+00	5.82E-03	0.00E+00	3.49E-03	
		4003	4003	1	107028	Acrolein	1	0.00E+00	2.52E-04	0.00E+00	2.52E-04	0.00E+00	1.51E-04	
		4003	4003	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.19E-05	0.00E+00	1.19E-05	0.00E+00	7.13E-06	

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
		4003	4003	1	71432	Benzene	1	0.00E+00	1.38E-03	0.00E+00	1.38E-03	0.00E+00	8.30E-04	
		4003	4003	1	7440508	Copper	1	0.00E+00	3.05E-05	0.00E+00	3.05E-05	0.00E+00	1.83E-05	
		4003	4003	1	50000	Formaldehyde	1	0.00E+00	1.28E-02	0.00E+00	1.28E-02	0.00E+00	7.69E-03	
		4003	4003	1	7439976	Mercury	1	0.00E+00	1.49E-05	0.00E+00	1.49E-05	0.00E+00	8.91E-06	
		4003	4003	1	7440020	Nickel	1	0.00E+00	2.90E-05	0.00E+00	2.90E-05	0.00E+00	1.74E-05	
		4003	4003	1	108883	Toluene	1	0.00E+00	7.83E-04	0.00E+00	7.83E-04	0.00E+00	4.70E-04	
		4003	4003	1	1330207	Xylenes	1	0.00E+00	3.15E-04	0.00E+00	3.15E-04	0.00E+00	1.89E-04	
		4003	4003	1	106990	Butadiene [1,3]	1	0.00E+00	1.61E-03	0.00E+00	1.61E-03	0.00E+00	9.69E-04	
		4003	4003	1	7440439	Cadmium	1	0.00E+00	1.11E-05	0.00E+00	1.11E-05	0.00E+00	6.68E-06	
		4003	4003	1	108907	Chlorbenzene	1	0.00E+00	1.49E-06	0.00E+00	1.49E-06	0.00E+00	8.91E-07	
		4003	4003	1	100414	Ethyl benzene	1	0.00E+00	8.10E-05	0.00E+00	8.10E-05	0.00E+00	4.86E-05	
		4003	4003	1	110543	Hexane	1	0.00E+00	2.00E-04	0.00E+00	2.00E-04	0.00E+00	1.20E-04	
		4003	4003	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.43E-07	0.00E+00	7.43E-07	0.00E+00	4.46E-07	
		4003	4003	1	7439921	Lead compounds (inorganic	1	0.00E+00	6.16E-05	0.00E+00	6.16E-05	0.00E+00	3.70E-05	
		4003	4003	1	7439965	Manganese	1	0.00E+00	2.30E-05	0.00E+00	2.30E-05	0.00E+00	1.38E-05	
		4003	4003	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.46E-04	0.00E+00	1.46E-04	0.00E+00	8.78E-05	
		4003	4003	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.69E-04	0.00E+00	2.69E-04	0.00E+00	1.61E-04	
		4003	4003	1	115071	Propylene	1	0.00E+00	3.47E-03	0.00E+00	3.47E-03	0.00E+00	2.08E-03	
		4003	4003	1	7782492	Selenium	1	0.00E+00	1.63E-05	0.00E+00	1.63E-05	0.00E+00	9.80E-06	
		4003	4003	1	7440473	Chromium	1	0.00E+00	4.46E-06	0.00E+00	4.46E-06	0.00E+00	2.67E-06	
		4003	4003	1	7440666	Zinc	1	0.00E+00	1.66E-04	0.00E+00	1.66E-04	0.00E+00	9.98E-05	
BoatsCrew5		4004	4004	1	9901	Diesel exhaust particulates	1	1.52E+02	0.00E+00	1.59E+02	0.00E+00	9.52E+01	0.00E+00	
		4004	4004	1	75070	Acetaldehyde	1	0.00E+00	5.82E-03	0.00E+00	5.82E-03	0.00E+00	3.49E-03	
		4004	4004	1	107028	Acrolein	1	0.00E+00	2.52E-04	0.00E+00	2.52E-04	0.00E+00	1.51E-04	
		4004	4004	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.19E-05	0.00E+00	1.19E-05	0.00E+00	7.13E-06	
		4004	4004	1	71432	Benzene	1	0.00E+00	1.38E-03	0.00E+00	1.38E-03	0.00E+00	8.30E-04	
		4004	4004	1	7440508	Copper	1	0.00E+00	3.05E-05	0.00E+00	3.05E-05	0.00E+00	1.83E-05	
		4004	4004	1	50000	Formaldehyde	1	0.00E+00	1.28E-02	0.00E+00	1.28E-02	0.00E+00	7.69E-03	
		4004	4004	1	7439976	Mercury	1	0.00E+00	1.49E-05	0.00E+00	1.49E-05	0.00E+00	8.91E-06	
		4004	4004	1	7440020	Nickel	1	0.00E+00	2.90E-05	0.00E+00	2.90E-05	0.00E+00	1.74E-05	
		4004	4004	1	108883	Toluene	1	0.00E+00	7.83E-04	0.00E+00	7.83E-04	0.00E+00	4.70E-04	
		4004	4004	1	1330207	Xylenes	1	0.00E+00	3.15E-04	0.00E+00	3.15E-04	0.00E+00	1.89E-04	
		4004	4004	1	106990	Butadiene [1,3]	1	0.00E+00	1.61E-03	0.00E+00	1.61E-03	0.00E+00	9.69E-04	
		4004	4004	1	7440439	Cadmium	1	0.00E+00	1.11E-05	0.00E+00	1.11E-05	0.00E+00	6.68E-06	
		4004	4004	1	108907	Chlorbenzene	1	0.00E+00	1.49E-06	0.00E+00	1.49E-06	0.00E+00	8.91E-07	
		4004	4004	1	100414	Ethyl benzene	1	0.00E+00	8.10E-05	0.00E+00	8.10E-05	0.00E+00	4.86E-05	
		4004	4004	1	110543	Hexane	1	0.00E+00	2.00E-04	0.00E+00	2.00E-04	0.00E+00	1.20E-04	
		4004	4004	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.43E-07	0.00E+00	7.43E-07	0.00E+00	4.46E-07	
		4004	4004	1	7439921	Lead compounds (inorganic	1	0.00E+00	6.16E-05	0.00E+00	6.16E-05	0.00E+00	3.70E-05	
		4004	4004	1	7439965	Manganese	1	0.00E+00	2.30E-05	0.00E+00	2.30E-05	0.00E+00	1.38E-05	
		4004	4004	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.46E-04	0.00E+00	1.46E-04	0.00E+00	8.78E-05	
		4004	4004	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.69E-04	0.00E+00	2.69E-04	0.00E+00	1.61E-04	
		4004	4004	1	115071	Propylene	1	0.00E+00	3.47E-03	0.00E+00	3.47E-03	0.00E+00	2.08E-03	
		4004	4004	1	7782492	Selenium	1	0.00E+00	1.63E-05	0.00E+00	1.63E-05	0.00E+00	9.80E-06	
		4004	4004	1	7440473	Chromium	1	0.00E+00	4.46E-06	0.00E+00	4.46E-06	0.00E+00	2.67E-06	
		4004	4004	1	7440666	Zinc	1	0.00E+00	1.66E-04	0.00E+00	1.66E-04	0.00E+00	9.98E-05	
BoatsCrew6		4005	4005	1	9901	Diesel exhaust particulates	1	1.52E+02	0.00E+00	1.59E+02	0.00E+00	9.52E+01	0.00E+00	
		4005	4005	1	75070	Acetaldehyde	1	0.00E+00	5.82E-03	0.00E+00	5.82E-03	0.00E+00	3.49E-03	
		4005	4005	1	107028	Acrolein	1	0.00E+00	2.52E-04	0.00E+00	2.52E-04	0.00E+00	1.51E-04	
		4005	4005	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.19E-05	0.00E+00	1.19E-05	0.00E+00	7.13E-06	
		4005	4005	1	71432	Benzene	1	0.00E+00	1.38E-03	0.00E+00	1.38E-03	0.00E+00	8.30E-04	
		4005	4005	1	7440508	Copper	1	0.00E+00	3.05E-05	0.00E+00	3.05E-05	0.00E+00	1.83E-05	
		4005	4005	1	50000	Formaldehyde	1	0.00E+00	1.28E-02	0.00E+00	1.28E-02	0.00E+00	7.69E-03	
		4005	4005	1	7439976	Mercury	1	0.00E+00	1.49E-05	0.00E+00	1.49E-05	0.00E+00	8.91E-06	
		4005	4005	1	7440020	Nickel	1	0.00E+00	2.90E-05	0.00E+00	2.90E-05	0.00E+00	1.74E-05	
		4005	4005	1	108883	Toluene	1	0.00E+00	7.83E-04	0.00E+00	7.83E-04	0.00E+00	4.70E-04	
		4005	4005	1	1330207	Xylenes	1	0.00E+00	3.15E-04	0.00E+00	3.15E-04	0.00E+00	1.89E-04	
		4005	4005	1	106990	Butadiene [1,3]	1	0.00E+00	1.61E-03	0.00E+00	1.61E-03	0.00E+00	9.69E-04	
		4005	4005	1	7440439	Cadmium	1	0.00E+00	1.11E-05	0.00E+00	1.11E-05	0.00E+00	6.68E-06	
		4005	4005	1	108907	Chlorbenzene	1	0.00E+00	1.49E-06	0.00E+00	1.49E-06	0.00E+00	8.91E-07	
		4005	4005	1	100414	Ethyl benzene	1	0.00E+00	8.10E-05	0.00E+00	8.10E-05	0.00E+00	4.86E-05	
		4005	4005	1	110543	Hexane	1	0.00E+00	2.00E-04	0.00E+00	2.00E-04	0.00E+00	1.20E-04	
		4005	4005	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.43E-07	0.00E+00	7.43E-07	0.00E+00	4.46E-07	
		4005	4005	1	7439921	Lead compounds (inorganic	1	0.00E+00	6.16E-05	0.00E+00	6.16E-05	0.00E+00	3.70E-05	
		4005	4005	1	7439965	Manganese	1	0.00E+00	2.30E-05	0.00E+00	2.30E-05	0.00E+00	1.38E-05	
		4005	4005	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.46E-04	0.00E+00	1.46E-04	0.00E+00	8.78E-05	
		4005	4005	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.69E-04	0.00E+00	2.69E-04	0.00E+00	1.61E-04	
		4005	4005	1	115071	Propylene	1	0.00E+00	3.47E-03	0.00E+00	3.47E-03	0.00E+00	2.08E-03	
		4005	4005	1	7782492	Selenium	1	0.00E+00	1.63E-05	0.00E+00	1.63E-05	0.00E+00	9.80E-06	
		4005	4005	1	7440473	Chromium	1	0.00E+00	4.46E-06	0.00E+00	4.46E-06	0.00E+00	2.67E-06	
		4005	4005	1	7440666	Zinc	1	0.00E+00	1.66E-04	0.00E+00	1.66E-04	0.00E+00	9.98E-05	
BoatsCrew7		4006	4006	1	9901	Diesel exhaust particulates	1	1.52E+02	0.00E+00	1.59E+02	0.00E+00	9.52E+01	0.00E+00	
		4006	4006	1	75070	Acetaldehyde	1	0.00E+00	5.82E-03	0.00E+00	5.82E-03	0.00E+00	3.49E-03	
		4006	4006	1	107028	Acrolein	1	0.00E+00	2.52E-04	0.00E+00	2.52E-04	0.00E+00	1.51E-04	
		4006	4006	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.19E-05	0.00E+00	1.19E-05	0.00E+00	7.13E-06	
		4006	4006	1	71432	Benzene	1	0.00E+00	1.38E-03	0.00E+00	1.38E-03	0.00E+00	8.30E-04	
		4006	4006	1	7440508	Copper	1	0.00E+00	3.05E-05	0.00E+00	3.05E-05	0.00E+00	1.83E-05	
		4006	4006	1	50000	Formaldehyde	1	0.00E+00	1.28E-02	0.00E+00	1.28E-02	0.00E+00	7.69E-03	
		4006	4006	1	7439976	Mercury	1	0.00E+00	1.49E-05	0.00E+00	1.49E-05	0.00E+00	8.91E-06	
		4006	4006	1	7440020	Nickel	1	0.00E+00	2.90E-05	0.00E+00	2.90E-05	0.00E+00	1.74E-05	
		4006	4006	1	108883	Toluene	1	0.00E+00	7.83E-04	0.00E+00	7.83E-04	0.00E+00	4.70E-04	
		4006	4006	1	1330207	Xylenes	1	0.00E+00	3.15E-04	0.00E+00	3.15E-04	0.00E+00	1.89E-04	
		4006	4006	1	106990	Butadiene [1,3]	1	0.00E+00	1.61E-03	0.00E+00	1.61E-03	0.00E+00	9.69E-04	
		4006	4006	1	7440439	Cadmium	1	0.00E+00	1.11E-05	0.00E+00	1.11E-05	0.00E+00	6.68E-06	
		4006	4006	1	108907	Chlorbenzene	1	0.00E+00	1.49E-06	0.00E+00	1.49E-06	0.00E+00	8.91E-07	
		4006	4006	1	100414	Ethyl benzene	1	0.00E+00	8.10E-05	0.00E+00	8.10E-05	0.00E+00	4.86E-05	
		4006	4006	1	110543	Hexane	1	0.00E+00	2.00E-04	0.00E+00	2.00E-04	0.00E+00	1.20E-04	
		4006	4006	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.43E-07	0.00E+00	7.43E-07	0.00E+00	4.46E-07	
		4006	4006	1	7439921	Lead compounds (inorganic	1	0.00E+00	6.16E-05	0.00E+00	6.16E-05	0.00E+00	3.70E-05	
		4006	4006	1	7439965	Manganese	1	0.00E+00	2.30E-05	0.00E+00	2.30E-05	0.00E+00	1.38E-05	
		4006	4006	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.46E-04	0.00E+00	1.46E-04	0.00E+00	8.78E-05	
		4006	4006	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.69E-04	0.00E+00	2.69E-04	0.00E+00	1.61E-04	
		4006	4006	1	115071	Propylene	1	0.00E+00	3.47E-03	0.00E+00	3.47E-03	0.00E+00	2.08E-03	
		4006	4006	1	7782492	Selenium	1	0.00E+00	1.63E-05	0.00E+00	1.63E-05	0.00E+00	9.80E-06	
		4006	4006	1	7440473	Chromium	1	0.00E+00	4.46E-06	0.00E+00	4.46E-06	0.00E+00	2.67E-06	
		4006	4006	1	7440666	Zinc	1	0.00E+00	1.66E-04	0.00E+00	1.66E-04	0.00E+00	9.98E-05	
BoatsCrew8		4007	4007	1	9901	Diesel exhaust particulates	1	1.52E+02	0.00E+00	1.59E+02	0.00E+00	9.52E+01	0.00E+00	
		4007	4007	1	75070	Acetaldehyde	1	0.00E+00	5.82E-03	0.00E+00	5.82E-03	0.00E+00	3.49E-03	
		4007	4007	1	107028	Acrolein	1	0.00E+00	2.52E-04	0.00E+00	2.52E-04	0.00E+00	1.51E-04	
		4007	4007	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.19E-05	0.00E+00	1.19E-05	0.00E+00	7.13E-06	
		4007	4007	1	71432	Benzene	1	0.00E+00	1.38E-03	0.00E+00	1.38E-03	0.00E+00	8.30E-04	
		4007	4007	1	7440508	Copper	1	0.00E+00	3.05E-05	0.00E+00	3.05E-05	0.00E+00	1.83E-05	
		4007	4007	1	50000	Formaldehyde	1	0.00E+00	1.28E-02	0.00E+00	1.28E-02	0.00E+00	7.69E-03	
		4007	4007	1	7439976	Mercury	1	0.00E+00	1.49E-05	0.00E+00	1.49E-05	0.00E+00	8.91E-06	
		4007	4007	1	7440020	Nickel	1	0.00E+00	2.90E-05	0.00E+00	2.90E-05	0.00E+00	1.74E-05	
		4007	4007	1	108883	Toluene	1	0.00E+00	7.83E-04	0.00E+00	7.83E-04	0.00E+00	4.70E-04	
		4007	4007	1	1330207	Xylenes	1	0.00E+00	3.15E-04	0.00E+00	3.15E-04	0.00E+00	1.89E-04	
		4007	4007	1	106990	Butadiene [1,3]	1	0.00E+00	1.61E-03	0.00E+00	1.61E-03	0.00E+00	9.69E-04	
		4007	4007	1	7440439	Cadmium	1	0.00E+00	1.11E-05	0.00E+00	1.11E-05	0.00E+00	6.68E-06	
		4007	4007	1	108907	Chlorbenzene	1	0.00E+00	1.49E-06	0.00E+00	1.49E-06	0.00E+00	8.91E-07	
		4007	4007	1	100414	Ethyl benzene	1	0.00E+00	8.10E-05	0.00E+00	8.10E-05	0.00E+00	4.86E-05	
		4007	4007	1	110543	Hexane	1	0.00E+00	2.00E-04	0.00E+00	2.00E-04	0.00E+00	1.20E-04	
		4007	4007	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.43E-07	0.00E+00	7.43E-07	0.00E+00	4.46E-07	
		4007	4007	1	7439921	Lead compounds (inorganic	1	0.00E+00	6.16E-05	0.00E+00	6.16E-05	0.00E+00	3.70E-05	
		4007	4007	1	7439965	Manganese	1	0.00E+00	2.30E-05	0.00E+00	2.30E-05	0.00E+00	1.38E-05	
		4007	4007	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.46E-04	0.00E+00	1.46E-04	0.00E+00	8.78E-05	
		4007	4007	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.69E-04	0.00E+00	2.69E-04	0.00E+00	1.61E-04	
		4007	4007	1	115071	Propylene	1	0.00E+00	3.47E-03	0.00E+00	3.47E-03	0.00E+00	2.08E-03	
		4007	4007	1	7782492	Selenium	1	0.00E+00	1.63E-05	0.00E+00	1.63E-05	0.00E+00	9.80E-06	
		4007	4007	1	7440473	Chromium	1	0.00E+00	4.46E-06	0.00E+00	4.46E-06	0.00E+00	2.67E-06	
		4007	4007	1	7440666	Zinc	1	0.00E+00	1.66E-04	0.00E+00	1.66E-04	0.00E+00	9.98E-05	
BoatsCrew9		4008	4008	1	9901	Diesel exhaust particulates	1	1.52E+02	0.00E+00	1.59E+02	0.00E+00	9.52E+01	0.00E+00	
		4008	4008	1	75070	Acetaldehyde	1	0.00E+00	5.82E-03	0.00E+00	5.82E-03	0.00E+00	3.49E-03	
		4008	4008	1	107028	Acrolein	1	0.00E+00	2.52E-04	0.00E+00	2.52E-04	0.00E+00	1.51E-04	
		4008	4008	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.19E-05	0.00E+00	1.19E-05	0.00E+00	7.13E-06	
		4008	4008	1	71432	Benzene	1	0.00E+00	1.38E-03	0.00E+00	1.38E-03	0.00E+00	8.30E-04	
		4008	4008	1	7440508	Copper	1	0.00E+00	3.05E-05	0.00E+00	3.05E-05	0.00E+00	1.83E-05	
		4008	4008	1	50000	Formaldehyde	1	0.00E+00	1.28E-02	0.00E+00	1.28E-02	0.00E+00	7.69E-03	
		4008	4008	1	7439976	Mercury	1	0.00E+00	1.49E-05	0.00E+00	1.49E-05	0.00E+00	8.91E-06	
		4008	4008	1	7440020	Nickel	1	0.00E+00	2.90E-05	0.00E+00	2.90E-05	0.00E+00	1.74E-05	
		4008	4008	1	108883	Toluene	1	0.00E+00	7.83E-04	0.00E+00	7.83E-04	0.00E+00	4.70E-04	
		4008	4008	1	1330207	Xylenes	1	0.00E+00	3.15E-04	0.00E+00	3.15E-04	0.00E+00	1.89E-04	
		4008	4008	1	106990	Butadiene [1,3]	1	0.00E+00	1.61E-03	0.00E+00	1.61E-03	0.00E+00	9.69E-04	
		4008	4008	1	7440439	Cadmium	1	0.00E+00	1.11E-05	0.00E+00	1.11E-05	0.00E+00	6.68E-06	
		4008	4008	1	108907	Chlorbenzene	1	0.00E+00	1.49E-06	0.00E+00	1.49E-06	0.00E+00	8.91E-07	
		4008	4008	1	100414	Ethyl benzene	1	0.00E+00	8.10E-05	0.00E+00	8.10E-05	0.00E+00	4.86E-05	
		4008	4008	1	110543	Hexane	1	0.00E+00	2.00E-04	0.00E+00	2.00E-04	0.00E+00	1.20E-04	
		4008	4008	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.43E-07	0.00E+00	7.43E-07	0.00E+00	4.46E-07	
		4008	4008	1	7439921	Lead compounds (inorganic	1	0.00E+00	6.16E-05	0.00E+00	6.16E-05	0.00E+00	3.70E-05	
		4008	4008	1	7439965	Manganese	1	0.00E+00	2.30E-05	0.00E+00	2.30E-05	0.00E+00	1.38E-05	
		4008	4008	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.46E-04	0.00E+00	1.46E-04	0.00E+00	8.78E-05	
		4008	4008	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.69E-04	0.00E+00	2.69E-04	0.00E+00	1.61E-04	
		4008	4008	1	115071	Propylene	1	0.00E+00	3.47E-03	0.00E+00	3.47E-03	0.00E+00	2.08E-03	
		4008	4008	1	7782492	Selenium	1	0.00E+00	1.63E-05	0.00E+00	1.63E-05	0.00E+00	9.80E-06	

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
		4008	4008	1	7440473	Chromium	1	0.00E+00	4.46E-06	0.00E+00	4.46E-06	0.00E+00	2.67E-06	
		4008	4008	1	7440666	Zinc	1	0.00E+00	1.66E-04	0.00E+00	1.66E-04	0.00E+00	9.98E-05	
BoatsCrew10		4009	4009	1	9901	Diesel exhaust particulates	1	1.52E+02	0.00E+00	1.59E+02	0.00E+00	9.52E+01	0.00E+00	
		4009	4009	1	75070	Acetaldehyde	1	0.00E+00	5.82E-03	0.00E+00	5.82E-03	0.00E+00	3.49E-03	
		4009	4009	1	107028	Acrolein	1	0.00E+00	2.52E-04	0.00E+00	2.52E-04	0.00E+00	1.51E-04	
		4009	4009	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.19E-05	0.00E+00	1.19E-05	0.00E+00	7.13E-06	
		4009	4009	1	71432	Benzene	1	0.00E+00	1.38E-03	0.00E+00	1.38E-03	0.00E+00	8.30E-04	
		4009	4009	1	7440508	Copper	1	0.00E+00	3.05E-05	0.00E+00	3.05E-05	0.00E+00	1.83E-05	
		4009	4009	1	50000	Formaldehyde	1	0.00E+00	1.28E-02	0.00E+00	1.28E-02	0.00E+00	7.69E-03	
		4009	4009	1	7439976	Mercury	1	0.00E+00	1.49E-05	0.00E+00	1.49E-05	0.00E+00	8.91E-06	
		4009	4009	1	7440020	Nickel	1	0.00E+00	2.90E-05	0.00E+00	2.90E-05	0.00E+00	1.74E-05	
		4009	4009	1	108883	Toluene	1	0.00E+00	7.83E-04	0.00E+00	7.83E-04	0.00E+00	4.70E-04	
		4009	4009	1	1330207	Xylenes	1	0.00E+00	3.15E-04	0.00E+00	3.15E-04	0.00E+00	1.89E-04	
		4009	4009	1	106990	Butadiene [1,3]	1	0.00E+00	1.61E-03	0.00E+00	1.61E-03	0.00E+00	9.69E-04	
		4009	4009	1	7440439	Cadmium	1	0.00E+00	1.11E-05	0.00E+00	1.11E-05	0.00E+00	6.68E-06	
		4009	4009	1	108907	Chlorbenzene	1	0.00E+00	1.49E-06	0.00E+00	1.49E-06	0.00E+00	8.91E-07	
		4009	4009	1	100414	Ethyl benzene	1	0.00E+00	8.10E-05	0.00E+00	8.10E-05	0.00E+00	4.86E-05	
		4009	4009	1	110543	Hexane	1	0.00E+00	2.00E-04	0.00E+00	2.00E-04	0.00E+00	1.20E-04	
		4009	4009	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.43E-07	0.00E+00	7.43E-07	0.00E+00	4.46E-07	
		4009	4009	1	7439921	Lead compounds (inorganic	1	0.00E+00	6.16E-05	0.00E+00	6.16E-05	0.00E+00	3.70E-05	
		4009	4009	1	7439965	Manganese	1	0.00E+00	2.30E-05	0.00E+00	2.30E-05	0.00E+00	1.38E-05	
		4009	4009	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.46E-04	0.00E+00	1.46E-04	0.00E+00	8.78E-05	
		4009	4009	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.69E-04	0.00E+00	2.69E-04	0.00E+00	1.61E-04	
		4009	4009	1	115071	Propylene	1	0.00E+00	3.47E-03	0.00E+00	3.47E-03	0.00E+00	2.08E-03	
		4009	4009	1	7782492	Selenium	1	0.00E+00	1.63E-05	0.00E+00	1.63E-05	0.00E+00	9.80E-06	
		4009	4009	1	7440473	Chromium	1	0.00E+00	4.46E-06	0.00E+00	4.46E-06	0.00E+00	2.67E-06	
		4009	4009	1	7440666	Zinc	1	0.00E+00	1.66E-04	0.00E+00	1.66E-04	0.00E+00	9.98E-05	
BoatsCrew11		4010	4010	1	9901	Diesel exhaust particulates	1	1.52E+02	0.00E+00	1.59E+02	0.00E+00	9.52E+01	0.00E+00	
		4010	4010	1	75070	Acetaldehyde	1	0.00E+00	5.82E-03	0.00E+00	5.82E-03	0.00E+00	3.49E-03	
		4010	4010	1	107028	Acrolein	1	0.00E+00	2.52E-04	0.00E+00	2.52E-04	0.00E+00	1.51E-04	
		4010	4010	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.19E-05	0.00E+00	1.19E-05	0.00E+00	7.13E-06	
		4010	4010	1	71432	Benzene	1	0.00E+00	1.38E-03	0.00E+00	1.38E-03	0.00E+00	8.30E-04	
		4010	4010	1	7440508	Copper	1	0.00E+00	3.05E-05	0.00E+00	3.05E-05	0.00E+00	1.83E-05	
		4010	4010	1	50000	Formaldehyde	1	0.00E+00	1.28E-02	0.00E+00	1.28E-02	0.00E+00	7.69E-03	
		4010	4010	1	7439976	Mercury	1	0.00E+00	1.49E-05	0.00E+00	1.49E-05	0.00E+00	8.91E-06	
		4010	4010	1	7440020	Nickel	1	0.00E+00	2.90E-05	0.00E+00	2.90E-05	0.00E+00	1.74E-05	
		4010	4010	1	108883	Toluene	1	0.00E+00	7.83E-04	0.00E+00	7.83E-04	0.00E+00	4.70E-04	
		4010	4010	1	1330207	Xylenes	1	0.00E+00	3.15E-04	0.00E+00	3.15E-04	0.00E+00	1.89E-04	
		4010	4010	1	106990	Butadiene [1,3]	1	0.00E+00	1.61E-03	0.00E+00	1.61E-03	0.00E+00	9.69E-04	
		4010	4010	1	7440439	Cadmium	1	0.00E+00	1.11E-05	0.00E+00	1.11E-05	0.00E+00	6.68E-06	
		4010	4010	1	108907	Chlorbenzene	1	0.00E+00	1.49E-06	0.00E+00	1.49E-06	0.00E+00	8.91E-07	
		4010	4010	1	100414	Ethyl benzene	1	0.00E+00	8.10E-05	0.00E+00	8.10E-05	0.00E+00	4.86E-05	
		4010	4010	1	110543	Hexane	1	0.00E+00	2.00E-04	0.00E+00	2.00E-04	0.00E+00	1.20E-04	
		4010	4010	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.43E-07	0.00E+00	7.43E-07	0.00E+00	4.46E-07	
		4010	4010	1	7439921	Lead compounds (inorganic	1	0.00E+00	6.16E-05	0.00E+00	6.16E-05	0.00E+00	3.70E-05	
		4010	4010	1	7439965	Manganese	1	0.00E+00	2.30E-05	0.00E+00	2.30E-05	0.00E+00	1.38E-05	
		4010	4010	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.46E-04	0.00E+00	1.46E-04	0.00E+00	8.78E-05	
		4010	4010	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.69E-04	0.00E+00	2.69E-04	0.00E+00	1.61E-04	
		4010	4010	1	115071	Propylene	1	0.00E+00	3.47E-03	0.00E+00	3.47E-03	0.00E+00	2.08E-03	
		4010	4010	1	7782492	Selenium	1	0.00E+00	1.63E-05	0.00E+00	1.63E-05	0.00E+00	9.80E-06	
		4010	4010	1	7440473	Chromium	1	0.00E+00	4.46E-06	0.00E+00	4.46E-06	0.00E+00	2.67E-06	
		4010	4010	1	7440666	Zinc	1	0.00E+00	1.66E-04	0.00E+00	1.66E-04	0.00E+00	9.98E-05	
BoatSupply1		4011	4011	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	Emissions based on VCAPCD Emission Factors
		4011	4011	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	based on drilling 36 wells over 30 years, 6 of them LLA wells
		4011	4011	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	(average of 1.2 redrills per year)
		4011	4011	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4011	4011	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4011	4011	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4011	4011	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4011	4011	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4011	4011	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4011	4011	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4011	4011	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4011	4011	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4011	4011	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4011	4011	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4011	4011	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4011	4011	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4011	4011	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4011	4011	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4011	4011	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4011	4011	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4011	4011	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4011	4011	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4011	4011	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4011	4011	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4011	4011	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply2		4012	4012	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4012	4012	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4012	4012	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4012	4012	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4012	4012	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4012	4012	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4012	4012	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4012	4012	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4012	4012	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4012	4012	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4012	4012	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4012	4012	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4012	4012	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4012	4012	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4012	4012	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4012	4012	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4012	4012	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4012	4012	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4012	4012	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4012	4012	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4012	4012	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4012	4012	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4012	4012	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4012	4012	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4012	4012	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply3		4013	4013	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4013	4013	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4013	4013	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4013	4013	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4013	4013	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4013	4013	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4013	4013	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4013	4013	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4013	4013	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4013	4013	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4013	4013	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4013	4013	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4013	4013	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4013	4013	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4013	4013	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4013	4013	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4013	4013	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4013	4013	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4013	4013	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4013	4013	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4013	4013	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4013	4013	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4013	4013	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4013	4013	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4013	4013	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply4		4014	4014	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4014	4014	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4014	4014	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4014	4014	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4014	4014	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4014	4014	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4014	4014	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4014	4014	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4014	4014	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4014	4014	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4014	4014	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4014	4014	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4014	4014	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4014	4014	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4014	4014	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4014	4014	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4014	4014	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
		4014	4014	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4014	4014	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4014	4014	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4014	4014	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4014	4014	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4014	4014	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4014	4014	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4014	4014	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply5		4015	4015	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4015	4015	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4015	4015	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4015	4015	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4015	4015	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4015	4015	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4015	4015	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4015	4015	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4015	4015	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4015	4015	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4015	4015	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4015	4015	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4015	4015	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4015	4015	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4015	4015	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4015	4015	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4015	4015	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4015	4015	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4015	4015	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4015	4015	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4015	4015	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4015	4015	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4015	4015	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4015	4015	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4015	4015	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply6		4016	4016	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4016	4016	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4016	4016	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4016	4016	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4016	4016	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4016	4016	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4016	4016	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4016	4016	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4016	4016	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4016	4016	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4016	4016	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4016	4016	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4016	4016	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4016	4016	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4016	4016	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4016	4016	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4016	4016	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4016	4016	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4016	4016	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4016	4016	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4016	4016	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4016	4016	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4016	4016	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4016	4016	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4016	4016	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply7		4017	4017	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4017	4017	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4017	4017	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4017	4017	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4017	4017	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4017	4017	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4017	4017	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4017	4017	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4017	4017	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4017	4017	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4017	4017	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4017	4017	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4017	4017	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4017	4017	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4017	4017	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4017	4017	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4017	4017	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4017	4017	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4017	4017	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4017	4017	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4017	4017	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4017	4017	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4017	4017	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4017	4017	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4017	4017	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply8		4018	4018	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4018	4018	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4018	4018	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4018	4018	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4018	4018	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4018	4018	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4018	4018	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4018	4018	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4018	4018	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4018	4018	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4018	4018	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4018	4018	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4018	4018	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4018	4018	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4018	4018	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4018	4018	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4018	4018	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4018	4018	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4018	4018	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4018	4018	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4018	4018	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4018	4018	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4018	4018	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4018	4018	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4018	4018	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply9		4019	4019	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4019	4019	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4019	4019	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4019	4019	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4019	4019	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4019	4019	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4019	4019	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4019	4019	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4019	4019	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4019	4019	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4019	4019	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4019	4019	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4019	4019	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4019	4019	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4019	4019	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4019	4019	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4019	4019	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4019	4019	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4019	4019	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4019	4019	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4019	4019	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4019	4019	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4019	4019	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4019	4019	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4019	4019	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply10		4020	4020	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4020	4020	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4020	4020	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4020	4020	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4020	4020	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4020	4020	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4020	4020	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4020	4020	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4020	4020	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4020	4020	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4020	4020	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
		4020	4020	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4020	4020	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4020	4020	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4020	4020	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4020	4020	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4020	4020	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4020	4020	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4020	4020	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4020	4020	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4020	4020	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4020	4020	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4020	4020	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4020	4020	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4020	4020	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply11		4021	4021	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4021	4021	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4021	4021	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4021	4021	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4021	4021	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4021	4021	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4021	4021	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4021	4021	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4021	4021	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4021	4021	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4021	4021	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4021	4021	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4021	4021	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4021	4021	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4021	4021	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4021	4021	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4021	4021	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4021	4021	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4021	4021	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4021	4021	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4021	4021	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4021	4021	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4021	4021	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4021	4021	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4021	4021	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply12		4022	4022	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4022	4022	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4022	4022	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4022	4022	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4022	4022	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4022	4022	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4022	4022	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4022	4022	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4022	4022	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4022	4022	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4022	4022	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4022	4022	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4022	4022	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4022	4022	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4022	4022	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4022	4022	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4022	4022	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4022	4022	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4022	4022	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4022	4022	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4022	4022	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4022	4022	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4022	4022	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4022	4022	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4022	4022	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply13		4023	4023	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4023	4023	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4023	4023	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4023	4023	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4023	4023	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4023	4023	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4023	4023	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4023	4023	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4023	4023	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4023	4023	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4023	4023	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4023	4023	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4023	4023	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4023	4023	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4023	4023	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4023	4023	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4023	4023	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4023	4023	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4023	4023	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4023	4023	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4023	4023	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4023	4023	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4023	4023	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4023	4023	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4023	4023	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply14		4024	4024	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4024	4024	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4024	4024	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4024	4024	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4024	4024	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4024	4024	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4024	4024	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4024	4024	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4024	4024	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4024	4024	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4024	4024	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4024	4024	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4024	4024	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4024	4024	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4024	4024	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4024	4024	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4024	4024	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4024	4024	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4024	4024	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4024	4024	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4024	4024	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4024	4024	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4024	4024	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4024	4024	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4024	4024	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply15		4025	4025	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4025	4025	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4025	4025	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4025	4025	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4025	4025	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4025	4025	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4025	4025	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4025	4025	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4025	4025	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4025	4025	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4025	4025	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4025	4025	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4025	4025	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4025	4025	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4025	4025	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4025	4025	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4025	4025	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4025	4025	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4025	4025	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4025	4025	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4025	4025	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4025	4025	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4025	4025	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4025	4025	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4025	4025	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply16		4026	4026	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4026	4026	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4026	4026	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4026	4026	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4026	4026	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
		4026	4026	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4026	4026	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4026	4026	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4026	4026	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4026	4026	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4026	4026	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4026	4026	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4026	4026	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4026	4026	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4026	4026	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4026	4026	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4026	4026	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4026	4026	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4026	4026	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4026	4026	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4026	4026	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4026	4026	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4026	4026	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4026	4026	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4026	4026	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply17		4027	4027	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4027	4027	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4027	4027	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4027	4027	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4027	4027	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4027	4027	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4027	4027	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4027	4027	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4027	4027	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4027	4027	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4027	4027	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4027	4027	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4027	4027	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4027	4027	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4027	4027	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4027	4027	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4027	4027	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4027	4027	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4027	4027	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4027	4027	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4027	4027	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4027	4027	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4027	4027	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4027	4027	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4027	4027	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply18		4028	4028	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4028	4028	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4028	4028	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4028	4028	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4028	4028	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4028	4028	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4028	4028	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4028	4028	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4028	4028	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4028	4028	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4028	4028	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4028	4028	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4028	4028	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4028	4028	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4028	4028	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4028	4028	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4028	4028	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4028	4028	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4028	4028	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4028	4028	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4028	4028	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4028	4028	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4028	4028	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4028	4028	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4028	4028	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply19		4029	4029	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4029	4029	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4029	4029	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4029	4029	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4029	4029	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4029	4029	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4029	4029	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4029	4029	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4029	4029	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4029	4029	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4029	4029	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4029	4029	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4029	4029	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4029	4029	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4029	4029	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4029	4029	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4029	4029	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4029	4029	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4029	4029	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4029	4029	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4029	4029	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4029	4029	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4029	4029	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4029	4029	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4029	4029	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply20		4030	4030	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4030	4030	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4030	4030	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4030	4030	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4030	4030	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4030	4030	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4030	4030	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4030	4030	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4030	4030	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4030	4030	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4030	4030	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4030	4030	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4030	4030	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4030	4030	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4030	4030	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4030	4030	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4030	4030	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4030	4030	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4030	4030	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4030	4030	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4030	4030	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4030	4030	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4030	4030	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4030	4030	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4030	4030	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply21		4031	4031	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4031	4031	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4031	4031	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4031	4031	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4031	4031	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4031	4031	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4031	4031	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4031	4031	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4031	4031	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4031	4031	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4031	4031	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4031	4031	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4031	4031	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4031	4031	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4031	4031	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4031	4031	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4031	4031	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4031	4031	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4031	4031	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4031	4031	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4031	4031	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4031	4031	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4031	4031	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4031	4031	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
		4031	4031	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply22		4032	4032	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4032	4032	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4032	4032	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4032	4032	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4032	4032	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4032	4032	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4032	4032	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4032	4032	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4032	4032	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4032	4032	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4032	4032	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4032	4032	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4032	4032	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4032	4032	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4032	4032	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4032	4032	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4032	4032	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4032	4032	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4032	4032	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4032	4032	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4032	4032	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4032	4032	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4032	4032	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4032	4032	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4032	4032	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply23		4033	4033	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4033	4033	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4033	4033	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4033	4033	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4033	4033	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4033	4033	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4033	4033	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4033	4033	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4033	4033	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4033	4033	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4033	4033	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4033	4033	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4033	4033	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4033	4033	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4033	4033	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4033	4033	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4033	4033	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4033	4033	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4033	4033	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4033	4033	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4033	4033	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4033	4033	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4033	4033	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4033	4033	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4033	4033	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply24		4034	4034	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4034	4034	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4034	4034	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4034	4034	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4034	4034	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4034	4034	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4034	4034	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4034	4034	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4034	4034	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4034	4034	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4034	4034	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4034	4034	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4034	4034	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4034	4034	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4034	4034	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4034	4034	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4034	4034	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4034	4034	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4034	4034	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4034	4034	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4034	4034	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4034	4034	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4034	4034	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4034	4034	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4034	4034	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply25		4035	4035	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4035	4035	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4035	4035	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4035	4035	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4035	4035	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4035	4035	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4035	4035	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4035	4035	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4035	4035	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4035	4035	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4035	4035	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4035	4035	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4035	4035	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4035	4035	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4035	4035	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4035	4035	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4035	4035	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4035	4035	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4035	4035	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4035	4035	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4035	4035	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4035	4035	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4035	4035	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4035	4035	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4035	4035	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply26		4036	4036	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4036	4036	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4036	4036	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4036	4036	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4036	4036	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4036	4036	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4036	4036	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4036	4036	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4036	4036	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4036	4036	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4036	4036	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4036	4036	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4036	4036	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4036	4036	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4036	4036	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4036	4036	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4036	4036	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4036	4036	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4036	4036	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4036	4036	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4036	4036	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4036	4036	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4036	4036	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4036	4036	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4036	4036	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply27		4037	4037	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4037	4037	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4037	4037	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4037	4037	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4037	4037	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4037	4037	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4037	4037	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4037	4037	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4037	4037	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4037	4037	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4037	4037	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4037	4037	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4037	4037	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4037	4037	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4037	4037	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4037	4037	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4037	4037	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4037	4037	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
		4037	4037	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4037	4037	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4037	4037	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4037	4037	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4037	4037	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4037	4037	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4037	4037	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply28		4038	4038	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4038	4038	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4038	4038	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4038	4038	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4038	4038	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4038	4038	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4038	4038	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4038	4038	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4038	4038	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4038	4038	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4038	4038	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4038	4038	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4038	4038	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4038	4038	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4038	4038	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4038	4038	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4038	4038	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4038	4038	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4038	4038	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4038	4038	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4038	4038	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4038	4038	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4038	4038	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4038	4038	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4038	4038	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply29		4039	4039	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4039	4039	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4039	4039	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4039	4039	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4039	4039	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4039	4039	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4039	4039	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4039	4039	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4039	4039	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4039	4039	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4039	4039	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4039	4039	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4039	4039	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4039	4039	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4039	4039	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4039	4039	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4039	4039	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4039	4039	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4039	4039	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4039	4039	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4039	4039	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4039	4039	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4039	4039	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4039	4039	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4039	4039	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply30		4040	4040	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4040	4040	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4040	4040	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4040	4040	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4040	4040	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4040	4040	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4040	4040	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4040	4040	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4040	4040	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4040	4040	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4040	4040	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4040	4040	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4040	4040	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4040	4040	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4040	4040	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4040	4040	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4040	4040	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4040	4040	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4040	4040	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4040	4040	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4040	4040	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4040	4040	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4040	4040	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4040	4040	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4040	4040	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply31		4041	4041	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4041	4041	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4041	4041	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4041	4041	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4041	4041	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4041	4041	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4041	4041	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4041	4041	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4041	4041	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4041	4041	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4041	4041	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4041	4041	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4041	4041	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4041	4041	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4041	4041	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4041	4041	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4041	4041	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4041	4041	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4041	4041	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4041	4041	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4041	4041	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4041	4041	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4041	4041	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4041	4041	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4041	4041	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply32		4042	4042	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4042	4042	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4042	4042	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4042	4042	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4042	4042	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4042	4042	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4042	4042	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4042	4042	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4042	4042	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4042	4042	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4042	4042	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4042	4042	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4042	4042	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4042	4042	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4042	4042	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4042	4042	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4042	4042	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4042	4042	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4042	4042	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4042	4042	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4042	4042	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4042	4042	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4042	4042	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4042	4042	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4042	4042	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply33		4043	4043	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4043	4043	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4043	4043	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4043	4043	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4043	4043	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4043	4043	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4043	4043	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4043	4043	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4043	4043	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4043	4043	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4043	4043	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4043	4043	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
		4043	4043	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4043	4043	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4043	4043	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4043	4043	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4043	4043	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4043	4043	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4043	4043	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4043	4043	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4043	4043	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4043	4043	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4043	4043	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4043	4043	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4043	4043	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply34		4044	4044	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4044	4044	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4044	4044	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4044	4044	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4044	4044	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4044	4044	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4044	4044	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4044	4044	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4044	4044	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4044	4044	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4044	4044	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4044	4044	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4044	4044	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4044	4044	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4044	4044	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4044	4044	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4044	4044	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4044	4044	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4044	4044	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4044	4044	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4044	4044	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4044	4044	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4044	4044	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4044	4044	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4044	4044	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply35		4045	4045	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4045	4045	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4045	4045	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4045	4045	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4045	4045	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4045	4045	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4045	4045	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4045	4045	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4045	4045	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4045	4045	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4045	4045	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4045	4045	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4045	4045	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4045	4045	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4045	4045	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4045	4045	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4045	4045	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4045	4045	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4045	4045	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4045	4045	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4045	4045	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4045	4045	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4045	4045	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4045	4045	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4045	4045	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply36		4046	4046	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4046	4046	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4046	4046	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4046	4046	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4046	4046	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4046	4046	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4046	4046	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4046	4046	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4046	4046	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4046	4046	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4046	4046	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4046	4046	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4046	4046	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4046	4046	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4046	4046	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4046	4046	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4046	4046	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4046	4046	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4046	4046	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4046	4046	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4046	4046	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4046	4046	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4046	4046	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4046	4046	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4046	4046	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply37		4047	4047	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4047	4047	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4047	4047	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4047	4047	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4047	4047	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4047	4047	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4047	4047	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4047	4047	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4047	4047	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4047	4047	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4047	4047	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4047	4047	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4047	4047	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4047	4047	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4047	4047	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4047	4047	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4047	4047	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4047	4047	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4047	4047	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4047	4047	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4047	4047	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4047	4047	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4047	4047	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4047	4047	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4047	4047	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
BoatSupply38		4048	4048	1	9901	Diesel exhaust particulates	1	5.46E+01	0.00E+00	5.52E+01	0.00E+00	5.52E+01	0.00E+00	
		4048	4048	1	75070	Acetaldehyde	1	0.00E+00	5.57E-03	0.00E+00	5.57E-03	0.00E+00	5.57E-03	
		4048	4048	1	107028	Acrolein	1	0.00E+00	2.41E-04	0.00E+00	2.41E-04	0.00E+00	2.41E-04	
		4048	4048	1	7440382	Arsenic and Compounds (in	1	0.00E+00	1.14E-05	0.00E+00	1.14E-05	0.00E+00	1.14E-05	
		4048	4048	1	71432	Benzene	1	0.00E+00	1.32E-03	0.00E+00	1.32E-03	0.00E+00	1.32E-03	
		4048	4048	1	7440508	Copper	1	0.00E+00	2.91E-05	0.00E+00	2.91E-05	0.00E+00	2.91E-05	
		4048	4048	1	50000	Formaldehyde	1	0.00E+00	1.23E-02	0.00E+00	1.23E-02	0.00E+00	1.23E-02	
		4048	4048	1	7439976	Mercury	1	0.00E+00	1.42E-05	0.00E+00	1.42E-05	0.00E+00	1.42E-05	
		4048	4048	1	7440020	Nickel	1	0.00E+00	2.77E-05	0.00E+00	2.77E-05	0.00E+00	2.77E-05	
		4048	4048	1	108883	Toluene	1	0.00E+00	7.49E-04	0.00E+00	7.49E-04	0.00E+00	7.49E-04	
		4048	4048	1	1330207	Xylenes	1	0.00E+00	3.01E-04	0.00E+00	3.01E-04	0.00E+00	3.01E-04	
		4048	4048	1	106990	Butadiene [1,3]	1	0.00E+00	1.55E-03	0.00E+00	1.55E-03	0.00E+00	1.55E-03	
		4048	4048	1	7440439	Cadmium	1	0.00E+00	1.07E-05	0.00E+00	1.07E-05	0.00E+00	1.07E-05	
		4048	4048	1	108907	Chlorbenzene	1	0.00E+00	1.42E-06	0.00E+00	1.42E-06	0.00E+00	1.42E-06	
		4048	4048	1	100414	Ethyl benzene	1	0.00E+00	7.75E-05	0.00E+00	7.75E-05	0.00E+00	7.75E-05	
		4048	4048	1	110543	Hexane	1	0.00E+00	1.91E-04	0.00E+00	1.91E-04	0.00E+00	1.91E-04	
		4048	4048	1	18540299	Chromium, hexavalent (and	1	0.00E+00	7.11E-07	0.00E+00	7.11E-07	0.00E+00	7.11E-07	
		4048	4048	1	7439921	Lead compounds (inorganic	1	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	5.90E-05	
		4048	4048	1	7439965	Manganese	1	0.00E+00	2.20E-05	0.00E+00	2.20E-05	0.00E+00	2.20E-05	
		4048	4048	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	1.40E-04	0.00E+00	1.40E-04	0.00E+00	1.40E-04	
		4048	4048	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	2.57E-04	0.00E+00	2.57E-04	0.00E+00	2.57E-04	
		4048	4048	1	115071	Propylene	1	0.00E+00	3.32E-03	0.00E+00	3.32E-03	0.00E+00	3.32E-03	
		4048	4048	1	7782492	Selenium	1	0.00E+00	1.56E-05	0.00E+00	1.56E-05	0.00E+00	1.56E-05	
		4048	4048	1	7440473	Chromium	1	0.00E+00	4.26E-06	0.00E+00	4.26E-06	0.00E+00	4.26E-06	
		4048	4048	1	7440666	Zinc	1	0.00E+00	1.59E-04	0.00E+00	1.59E-04	0.00E+00	1.59E-04	
HollyFlareUnPlanned		5000	5000	1	71432	Benzene	1	1.33E-03	1.33E-03	1.33E-03	1.33E-03	1.33E-03	1.33E-03	Flare emissions based on SCAQMD baseline Emission Factors
		5000	5000	1	50000	Formaldehyde	1	9.78E-03	9.78E-03	9.78E-03	9.78E-03	9.78E-03	9.78E-03	
		5000	5000	1	1151	PAHs, total, w/o individ. com	1	2.51E-05	2.51E-05	2.51E-05	2.51E-05	2.51E-05	2.51E-05	
		5000	5000	1	91203	Naphthalene [PAH, POM]	1	9.20E-05	9.20E-05	9.20E-05	9.20E-05	9.20E-05	9.20E-05	
		5000	5000	1	75070	Acetaldehyde	1	3.41E-04	3.41E-04	3.41E-04	3.41E-04	3.41E-04	3.41E-04	
		5000	5000	1	107028	Acrolein	1	5.46E-05	5.46E-05	5.46E-05	5.46E-05	5.46E-05	5.46E-05	

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
		5000	5000	1	100414	Ethyl benzene	1	2.73E-04	2.73E-04	2.73E-04	2.73E-04	2.73E-04	2.73E-04	
		5000	5000	1	75569	Propylene oxide	1	2.48E-04	2.48E-04	2.48E-04	2.48E-04	2.48E-04	2.48E-04	
		5000	5000	1	108883	Toluene	1	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	
		5000	5000	1	1330207	Xylenes	1	5.46E-04	5.46E-04	5.46E-04	5.46E-04	5.46E-04	5.46E-04	
HollyFlarePilot		5001	5001	1	71432	Benzene	1	1.48E-01	1.69E-05	1.48E-01	1.69E-05	1.48E-01	1.69E-05	Flare emissions based on SCAQMD baseline Emission Factors
		5001	5001	1	50000	Formaldehyde	1	1.09E+00	1.25E-04	1.09E+00	1.25E-04	1.09E+00	1.25E-04	
		5001	5001	1	1151	PAHs, total, w/o individ. com	1	2.80E-03	3.20E-07	2.80E-03	3.20E-07	2.80E-03	3.20E-07	
		5001	5001	1	91203	Naphthalene [PAH, POM]	1	1.03E-02	1.17E-06	1.03E-02	1.17E-06	1.03E-02	1.17E-06	
		5001	5001	1	75070	Acetaldehyde	1	3.81E-02	4.35E-06	3.81E-02	4.35E-06	3.81E-02	4.35E-06	
		5001	5001	1	107028	Acrolein	1	6.09E-03	6.96E-07	6.09E-03	6.96E-07	6.09E-03	6.96E-07	
		5001	5001	1	100414	Ethyl benzene	1	3.04E-02	3.47E-06	3.04E-02	3.47E-06	3.04E-02	3.47E-06	
		5001	5001	1	75569	Propylene oxide	1	2.76E-02	3.15E-06	2.76E-02	3.15E-06	2.76E-02	3.15E-06	
		5001	5001	1	108883	Toluene	1	1.24E-01	1.42E-05	1.24E-01	1.42E-05	1.24E-01	1.42E-05	
		5001	5001	1	1330207	Xylenes	1	6.09E-02	6.96E-06	6.09E-02	6.96E-06	6.09E-02	6.96E-06	
HollyFlarePurge		5002	5002	1	71432	Benzene	1	5.30E-01	6.05E-05	5.30E-01	6.05E-05	5.30E-01	6.05E-05	Flare emissions based on SCAQMD baseline Emission Factors
		5002	5002	1	50000	Formaldehyde	1	3.90E+00	4.45E-04	3.90E+00	4.45E-04	3.90E+00	4.45E-04	
		5002	5002	1	1151	PAHs, total, w/o individ. com	1	1.00E-02	1.14E-06	1.00E-02	1.14E-06	1.00E-02	1.14E-06	
		5002	5002	1	91203	Naphthalene [PAH, POM]	1	3.67E-02	4.19E-06	3.67E-02	4.19E-06	3.67E-02	4.19E-06	
		5002	5002	1	75070	Acetaldehyde	1	1.36E-01	1.55E-05	1.36E-01	1.55E-05	1.36E-01	1.55E-05	
		5002	5002	1	107028	Acrolein	1	2.18E-02	2.49E-06	2.18E-02	2.49E-06	2.18E-02	2.49E-06	
		5002	5002	1	100414	Ethyl benzene	1	1.09E-01	1.24E-05	1.09E-01	1.24E-05	1.09E-01	1.24E-05	
		5002	5002	1	75569	Propylene oxide	1	9.87E-02	1.13E-05	9.87E-02	1.13E-05	9.87E-02	1.13E-05	
		5002	5002	1	108883	Toluene	1	4.44E-01	5.06E-05	4.44E-01	5.06E-05	4.44E-01	5.06E-05	
		5002	5002	1	1330207	Xylenes	1	2.18E-01	2.49E-05	2.18E-01	2.49E-05	2.18E-01	2.49E-05	
HollyBackup Emergency Generator		5003	5003	1	9901	Diesel exhaust particulates	1	3.89E+00	0.00E+00	3.89E+00	0.00E+00	3.89E+00	0.00E+00	Emissions based on VCAPCD Emission Factors
		5003	5003	1	75070	Acetaldehyde	1	0.00E+00	2.35E-05	0.00E+00	2.35E-05	0.00E+00	2.35E-05	
		5003	5003	1	107028	Acrolein	1	0.00E+00	1.02E-06	0.00E+00	1.02E-06	0.00E+00	1.02E-06	
		5003	5003	1	7440382	Arsenic and Compounds (in	1	0.00E+00	4.80E-08	0.00E+00	4.80E-08	0.00E+00	4.80E-08	
		5003	5003	1	71432	Benzene	1	0.00E+00	5.59E-06	0.00E+00	5.59E-06	0.00E+00	5.59E-06	
		5003	5003	1	7440508	Copper	1	0.00E+00	1.23E-07	0.00E+00	1.23E-07	0.00E+00	1.23E-07	
		5003	5003	1	50000	Formaldehyde	1	0.00E+00	5.18E-05	0.00E+00	5.18E-05	0.00E+00	5.18E-05	
		5003	5003	1	7439976	Mercury	1	0.00E+00	6.00E-08	0.00E+00	6.00E-08	0.00E+00	6.00E-08	
		5003	5003	1	7440020	Nickel	1	0.00E+00	1.17E-07	0.00E+00	1.17E-07	0.00E+00	1.17E-07	
		5003	5003	1	108883	Toluene	1	0.00E+00	3.16E-06	0.00E+00	3.16E-06	0.00E+00	3.16E-06	
		5003	5003	1	1330207	Xylenes	1	0.00E+00	1.27E-06	0.00E+00	1.27E-06	0.00E+00	1.27E-06	
		5003	5003	1	106990	Butadiene [1,3]	1	0.00E+00	6.52E-06	0.00E+00	6.52E-06	0.00E+00	6.52E-06	
		5003	5003	1	7440439	Cadmium	1	0.00E+00	4.50E-08	0.00E+00	4.50E-08	0.00E+00	4.50E-08	
		5003	5003	1	108907	Chlorbenzene	1	0.00E+00	6.00E-09	0.00E+00	6.00E-09	0.00E+00	6.00E-09	
		5003	5003	1	100414	Ethyl benzene	1	0.00E+00	3.27E-07	0.00E+00	3.27E-07	0.00E+00	3.27E-07	
		5003	5003	1	110543	Hexane	1	0.00E+00	8.07E-07	0.00E+00	8.07E-07	0.00E+00	8.07E-07	
		5003	5003	1	18540299	Chromium, hexavalent (and	1	0.00E+00	3.00E-09	0.00E+00	3.00E-09	0.00E+00	3.00E-09	
		5003	5003	1	7439921	Lead compounds (inorganic	1	0.00E+00	2.49E-07	0.00E+00	2.49E-07	0.00E+00	2.49E-07	
		5003	5003	1	7439965	Manganese	1	0.00E+00	9.30E-08	0.00E+00	9.30E-08	0.00E+00	9.30E-08	
		5003	5003	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	5.91E-07	0.00E+00	5.91E-07	0.00E+00	5.91E-07	
		5003	5003	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	1.09E-06	0.00E+00	1.09E-06	0.00E+00	1.09E-06	
		5003	5003	1	115071	Propylene	1	0.00E+00	1.40E-05	0.00E+00	1.40E-05	0.00E+00	1.40E-05	
		5003	5003	1	7782492	Selenium	1	0.00E+00	6.60E-08	0.00E+00	6.60E-08	0.00E+00	6.60E-08	
		5003	5003	1	7440473	Chromium	1	0.00E+00	1.80E-08	0.00E+00	1.80E-08	0.00E+00	1.80E-08	
		5003	5003	1	7440666	Zinc	1	0.00E+00	6.72E-07	0.00E+00	6.72E-07	0.00E+00	6.72E-07	
HollyPedestal Crane		5004	5004	1	9901	Diesel exhaust particulates	1	3.41E+00	0.00E+00	3.41E+00	0.00E+00	3.41E+00	0.00E+00	Emissions based on VCAPCD Emission Factors
		5004	5004	1	75070	Acetaldehyde	1	0.00E+00	1.10E-05	0.00E+00	1.10E-05	0.00E+00	1.10E-05	
		5004	5004	1	107028	Acrolein	1	0.00E+00	4.78E-07	0.00E+00	4.78E-07	0.00E+00	4.78E-07	
		5004	5004	1	7440382	Arsenic and Compounds (in	1	0.00E+00	2.26E-08	0.00E+00	2.26E-08	0.00E+00	2.26E-08	
		5004	5004	1	71432	Benzene	1	0.00E+00	2.63E-06	0.00E+00	2.63E-06	0.00E+00	2.63E-06	
		5004	5004	1	7440508	Copper	1	0.00E+00	5.78E-08	0.00E+00	5.78E-08	0.00E+00	5.78E-08	
		5004	5004	1	50000	Formaldehyde	1	0.00E+00	2.43E-05	0.00E+00	2.43E-05	0.00E+00	2.43E-05	
		5004	5004	1	7439976	Mercury	1	0.00E+00	2.82E-08	0.00E+00	2.82E-08	0.00E+00	2.82E-08	
		5004	5004	1	7440020	Nickel	1	0.00E+00	5.50E-08	0.00E+00	5.50E-08	0.00E+00	5.50E-08	
		5004	5004	1	108883	Toluene	1	0.00E+00	1.49E-06	0.00E+00	1.49E-06	0.00E+00	1.49E-06	
		5004	5004	1	1330207	Xylenes	1	0.00E+00	5.98E-07	0.00E+00	5.98E-07	0.00E+00	5.98E-07	
		5004	5004	1	106990	Butadiene [1,3]	1	0.00E+00	3.07E-06	0.00E+00	3.07E-06	0.00E+00	3.07E-06	
		5004	5004	1	7440439	Cadmium	1	0.00E+00	2.12E-08	0.00E+00	2.12E-08	0.00E+00	2.12E-08	
		5004	5004	1	108907	Chlorbenzene	1	0.00E+00	2.82E-09	0.00E+00	2.82E-09	0.00E+00	2.82E-09	
		5004	5004	1	100414	Ethyl benzene	1	0.00E+00	1.54E-07	0.00E+00	1.54E-07	0.00E+00	1.54E-07	
		5004	5004	1	110543	Hexane	1	0.00E+00	3.79E-07	0.00E+00	3.79E-07	0.00E+00	3.79E-07	
		5004	5004	1	18540299	Chromium, hexavalent (and	1	0.00E+00	1.41E-09	0.00E+00	1.41E-09	0.00E+00	1.41E-09	
		5004	5004	1	7439921	Lead compounds (inorganic	1	0.00E+00	1.17E-07	0.00E+00	1.17E-07	0.00E+00	1.17E-07	
		5004	5004	1	7439965	Manganese	1	0.00E+00	4.37E-08	0.00E+00	4.37E-08	0.00E+00	4.37E-08	
		5004	5004	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	2.78E-07	0.00E+00	2.78E-07	0.00E+00	2.78E-07	
		5004	5004	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	5.10E-07	0.00E+00	5.10E-07	0.00E+00	5.10E-07	
		5004	5004	1	115071	Propylene	1	0.00E+00	6.58E-06	0.00E+00	6.58E-06	0.00E+00	6.58E-06	
		5004	5004	1	7782492	Selenium	1	0.00E+00	3.10E-08	0.00E+00	3.10E-08	0.00E+00	3.10E-08	
		5004	5004	1	7440473	Chromium	1	0.00E+00	8.46E-09	0.00E+00	8.46E-09	0.00E+00	8.46E-09	
		5004	5004	1	7440666	Zinc	1	0.00E+00	3.16E-07	0.00E+00	3.16E-07	0.00E+00	3.16E-07	
HollyGenerators		5005	5005	1	95636	1,2,4-Trimethylbenzene	1	3.75E-01	9.32E-05	4.82E-01	1.33E-04	4.82E-01	1.33E-04	Emissions based on AP-42 section 3.2, lean burn 4 stroke
		5005	5005	1	106990	Butadiene [1,3]	1	5.16E+00	1.74E-03	6.51E+00	2.49E-03	6.51E+00	2.49E-03	30 year average based on 6 years of project emissions and 24 years
		5005	5005	1	91576	2-Methyl naphthalene [PAH,	1	4.13E-01	2.16E-04	5.00E-01	3.09E-04	5.00E-01	3.09E-04	of baseline emissions
		5005	5005	1	83329	Acenaphthene [PAH, POM]	1	6.37E-03	8.15E-06	6.37E-03	1.16E-05	6.37E-03	1.16E-05	
		5005	5005	1	208968	Acenaphthylene [PAH, POM	1	2.82E-02	3.60E-05	2.82E-02	5.15E-05	2.82E-02	5.15E-05	
		5005	5005	1	75070	Acetaldehyde	1	4.26E+01	5.45E-02	4.26E+01	7.78E-02	4.26E+01	7.78E-02	
		5005	5005	1	107028	Acrolein	1	2.62E+01	3.35E-02	2.62E+01	4.79E-02	2.62E+01	4.79E-02	
		5005	5005	1	71432	Benzene	1	2.24E+00	2.87E-03	2.24E+00	4.10E-03	2.24E+00	4.10E-03	
		5005	5005	1	205992	Benzo[b]fluoranthene [PAH,	1	8.46E-04	1.08E-06	8.46E-04	1.55E-06	8.46E-04	1.55E-06	
		5005	5005	1	192972	Benzo[e]pyrene [PAH, POM	1	2.12E-03	2.71E-06	2.12E-03	3.86E-06	2.12E-03	3.86E-06	
		5005	5005	1	191242	Benzo[g,h,i]perylene [PAH,	1	2.11E-03	2.70E-06	2.11E-03	3.86E-06	2.11E-03	3.86E-06	
		5005	5005	1	108907	Chlorbenzene	1	1.55E-01	1.98E-04	1.55E-01	2.83E-04	1.55E-01	2.83E-04	
		5005	5005	1	218019	Chrysene [PAH, POM]	1	3.53E-03	4.52E-06	3.53E-03	6.45E-06	3.53E-03	6.45E-06	
		5005	5005	1	106934	Ethylene dibromide {1,2-Dib	1	2.26E-01	2.89E-04	2.26E-01	4.13E-04	2.26E-01	4.13E-04	
		5005	5005	1	206440	Fluoranthene [PAH, POM]	1	5.66E-03	7.24E-06	5.66E-03	1.03E-05	5.66E-03	1.03E-05	
		5005	5005	1	86737	Fluorene [PAH, POM]	1	2.89E-02	3.70E-05	2.89E-02	5.28E-05	2.89E-02	5.28E-05	
		5005	5005	1	50000	Formaldehyde	1	2.69E+02	3.44E-01	2.69E+02	4.92E-01	2.69E+02	4.92E-01	
		5005	5005	1	67561	Methanol	1	1.27E+01	1.63E-02	1.27E+01	2.33E-02	1.27E+01	2.33E-02	
		5005	5005	1	75092	Methylene chloride {Dichlorc	1	1.02E-01	1.30E-04	1.02E-01	1.86E-04	1.02E-01	1.86E-04	
		5005	5005	1	110543	Hexane	1	5.66E+00	7.24E-03	5.66E+00	1.03E-02	5.66E+00	1.03E-02	
		5005	5005	1	91203	Naphthalene [PAH, POM]	1	3.79E-01	4.85E-04	3.79E-01	6.93E-04	3.79E-01	6.93E-04	
		5005	5005	1	1151	PAHs, total, w/o individ. com	1	1.37E-01	1.75E-04	1.37E-01	2.50E-04	1.37E-01	2.50E-04	
		5005	5005	1	85018	Phenanthrene [PAH, POM]	1	5.30E-02	6.78E-05	5.30E-02	9.68E-05	5.30E-02	9.68E-05	
		5005	5005	1	129000	Pyrene [PAH, POM]	1	6.93E-03	8.87E-06	6.93E-03	1.27E-05	6.93E-03	1.27E-05	
		5005	5005	1	100425	Styrene	1	1.20E-01	1.54E-04	1.20E-01	2.20E-04	1.20E-01	2.20E-04	
		5005	5005	1	108883	Toluene	1	2.08E+00	2.66E-03	2.08E+00	3.80E-03	2.08E+00	3.80E-03	
		5005	5005	1	75014	Vinyl chloride	1	7.60E-02	9.71E-05	7.60E-02	1.39E-04	7.60E-02	1.39E-04	
		5005	5005	1	1330207	Xylenes	1	9.38E-01	1.20E-03	9.38E-01	1.71E-03	9.38E-01	1.71E-03	
HollyDrilling Engines Combined		5006	5006	1	9901	Diesel exhaust particulates	1	8.71E+01	0.00E+00	1.01E+02	0.00E+00	1.01E+02	0.00E+00	Emissions based on VCAPCD Emission Factors
		5006	5006	1	75070	Acetaldehyde	1	0.00E+00	1.71E-02	0.00E+00	1.71E-02	0.00E+00	1.71E-02	30 year average based on 6 years of project emissions and 24 years
		5006	5006	1	107028	Acrolein	1	0.00E+00	7.40E-04	0.00E+00	7.40E-04	0.00E+00	7.40E-04	of baseline emissions
		5006	5006	1	7440382	Arsenic and Compounds (in	1	0.00E+00	3.49E-05	0.00E+00	3.49E-05	0.00E+00	3.49E-05	
		5006	5006	1	71432	Benzene	1	0.00E+00	4.07E-03	0.00E+00	4.07E-03	0.00E+00	4.07E-03	
		5006	5006	1	7440508	Copper	1	0.00E+00	8.95E-05	0.00E+00	8.95E-05	0.00E+00	8.95E-05	
		5006	5006	1	50000	Formaldehyde	1	0.00E+00	3.77E-02	0.00E+00	3.77E-02	0.00E+00	3.77E-02	
		5006	5006	1	7439976	Mercury	1	0.00E+00	4.36E-05	0.00E+00	4.36E-05	0.00E+00	4.36E-05	
		5006	5006	1	7440020	Nickel	1	0.00E+00	8.51E-05	0.00E+00	8.51E-05	0.00E+00	8.51E-05	
		5006	5006	1	108883	Toluene	1	0.00E+00	2.30E-03	0.00E+00	2.30E-03	0.00E+00	2.30E-03	
		5006	5006	1	1330207	Xylenes	1	0.00E+00	9.25E-04	0.00E+00	9.25E-04	0.00E+00	9.25E-04	
		5006	5006	1	106990	Butadiene [1,3]	1	0.00E+00	4.74E-03	0.00E+00	4.74E-03	0.00E+00	4.74E-03	
		5006	5006	1	7440439	Cadmium	1	0.00E+00	3.27E-05	0.00E+00	3.27E-05	0.00E+00	3.27E-05	
		5006	5006	1	108907	Chlorbenzene	1	0.00E+00	4.36E-06	0.00E+00	4.36E-06	0.00E+00	4.36E-06	
		5006	5006	1	100414	Ethyl benzene	1	0.00E+00	2.38E-04	0.00E+00	2.38E-04	0.00E+00	2.38E-04	
		5006	5006	1	110543	Hexane	1	0.00E+00	5.87E-04	0.00E+00	5.87E-04	0.00E+00	5.87E-04	
		5006	5006	1	18540299	Chromium, hexavalent (and	1	0.00E+00	2.18E-06	0.00E+00	2.18E-06	0.00E+00	2.18E-06	
		5006	5006	1	7439921	Lead compounds (inorganic	1	0.00E+00	1.81E-04	0.00E+00	1.81E-04	0.00E+00	1.81E-04	
		5006	5006	1	7439965	Manganese	1	0.00E+00	6.76E-05	0.00E+00	6.76E-05	0.00E+00	6.76E-05	
		5006	5006	1	91203	Naphthalene [PAH, POM]	1	0.00E+00	4.30E-04	0.00E+00	4.30E-04	0.00E+00	4.30E-04	
		5006	5006	1	1151	PAHs, total, w/o individ. com	1	0.00E+00	7.90E-04	0.00E+00	7.90E-04	0.00E+00	7.90E-04	
		5006	5006	1	115071	Propylene	1	0.00E+00	1.02E-02	0.00E+00	1.02E-02	0.00E+00	1.02E-02	
		5006	5006	1	7782492	Selenium	1	0.00E+00	4.80E-05	0.00E+00	4.80E-05	0.00E+00	4.80E-05	
		5006	5006	1	7440473	Chromium	1	0.00E+00	1.31E-05	0.00E+00	1.31E-05	0.00E+00	1.31E-05	
		5006	5006	1	7440666	Zinc	1	0.00E+00	4.89E-04	0.00E+00	4.89E-04	0.00E+00	4.89E-04	
HollyFugitives		5007	5007	1	71432	Benzene	1	1.74E+02	5.17E-02	1.74E+02	5.17E-02	1.74E+02	5.17E-02	Emission Factors based on SBCAPCD Spreadsheets with Holly Gas
		5007	5007	1	108883	Toluene	1	1.22E+02	1.40E-02	1.22E+02	1.40E-02	1.22E+02	1.40E-02	
		5007	5007	1	100414	Ethyl benzene	1	1.42E+01	1.62E-03	1.42E+01	1.62E-03	1.42E+01	1.62E-03	
		5007	5007	1	1330207	Xylenes	1	2.23E+01	2.55E-03	2.23E+01	2.55E-03	2.23E+01	2.55E-03	
		5007	5007	1	110543	Hexane	1	3.15E+02	3.59E-02	3.15E+02	3.59E-02	3.15E+02	3.59E-02	
		5007	5007	1	7783064	Hydrogen sulfide	1	5.15E+03	8.92E-01	5.15E+03	8.92E-01	5.15E+03	8.92E-01	
		5007	5007	1	106467	p-Dichlorobenzene {1,4-Dicl	1	1.43E+00	1.64E-04	1.43E+00	1.64E-04	1.43E+00	1.64E-04	
		5007	5007	1	67561	Methanol	1	8.85E+01	1.01E-02	8.85E+01	1.01E-02	8.85E+01	1.01E-02	

Inputs

Sumps ROG/TOG ratio	0.147	as per SBCAPCD Spreadsheets
LPG Loading rack ROG/TOG ratio	1.0	all propane
NGL Loading rack ROG/TOG ratio	1.0	all butane
Oil Tank 202/3/4 ROG/TOG ratio	0.885	used crude oil evaporative losses, Tank spreadsheets
Pig Receiver Emulsion ROG/TOG ratio	0.885	used crude oil evaporative losses, Tank spreadsheets
Pig Receiver P gas ROG/TOG ratio	0.51	from gas composition 2015 holly gas
Segments in crew boat route	11	for line source equal segment length

Health Risk Assessment Emissions

Equipment/Sources	Code	Stack			Pollutant Code	HAP Name		Baseline		Proposed Project		Mitigated Project		Comments
								lbs/yr	lbs/hr	lbs/yr	lbs/hr	lbs/yr	lbs/hr	
Segments in supply boat route		38			for line source equal segment length, angled route									
Holly gas ROG/TOG ratio		0.51			from gas composition 2015 holly gas									
PM10 fraction of Total DPM		0.976			SCAQMD CEIDARS tables for internal combustion, diesel, non-electrical									
Mitigations														
Fraction reduction in crew boat DPM emissions		0.4			CARB Level II DPF									
Fraction reduction in supply boat DPM emissions		0			CARB Level II DPF									
Fraction reduction in emissions at EOF -mit		0			Zones 3-8 only, no additional mitigation - see EOF_Fugitives tab									
Fraction reduction in Firewater pump DPM, mitP		0			In addition to PP applicant proposed measures									
Fraction reduction in Emerg Gen pump DPM		0												
Methanol tanks vapor balance or recovery		0.69			from AP-42 for vapor balanced loading									

Notes

Holly peak hour drilling includes crane, cement unit and generator only
Holly fugitives combine all fugitive components with pigging, sunps/tanks/separators and solvents/coatings
Pig reciever gas annual includes utility and seep gas. Hourly only gas reciever.
Pig reciever emulsion annual includesAAPL launcher gas. Hourly only Holly emulsion pig reciever.
Peak hour truck trips assume 2 RT trucks
Truck emissions based on 5 mpg fuel efficiency

HAP Emission Factors

Type	CAS	Pollutant	EF, lbs/kgal	EF, lbs/mmbtu	Source
Diesel IC Engines					
	9901	Diesel exhaust particulates			
	75070	Acetaldehyde	0.7833	5.72E-03	VCAPCD and SBCAPCD
	107028	Acrolein	0.0339	2.47E-04	VCAPCD and SBCAPCD
	7440382	Arsenic and Compounds (inorganic)	0.0016	1.17E-05	VCAPCD and SBCAPCD
	71432	Benzene	0.1863	1.36E-03	VCAPCD and SBCAPCD
	7440508	Copper	0.0041	2.99E-05	VCAPCD and SBCAPCD
	50000	Formaldehyde	1.7261	1.26E-02	VCAPCD and SBCAPCD
	7439976	Mercury	0.0020	1.46E-05	VCAPCD and SBCAPCD
	7440020	Nickel	0.0039	2.85E-05	VCAPCD and SBCAPCD
	108883	Toluene	0.1054	7.69E-04	VCAPCD and SBCAPCD
	1330207	Xylenes	0.0424	3.09E-04	VCAPCD and SBCAPCD
	106990	Butadiene [1,3]	0.2174	1.59E-03	VCAPCD
	7440439	cadmium	0.0015	1.09E-05	VCAPCD
	108907	Chlorbenzene	0.0002	1.46E-06	VCAPCD
	100414	ethyl benzene	0.0109	7.96E-05	VCAPCD
	110543	hexane	0.0269	1.96E-04	VCAPCD
	18540299	Chromium, hexavalent (and compounds)	0.0001	7.30E-07	VCAPCD
	7439921	Lead compounds (inorganic)	0.0083	6.06E-05	VCAPCD
	7439965	manganese	0.0031	2.26E-05	VCAPCD
	91203	Naphthalene [PAH, POM]	0.0197	1.44E-04	VCAPCD
	1151	PAHs, total, w/o individ. components reported [PAH, POM]	0.0362	2.64E-04	SCAQMD, without Napthalene
	115071	propylene	0.4670	3.41E-03	VCAPCD
	7782492	selenium	0.0022	1.61E-05	VCAPCD
	7440473	Chromium	0.0006	4.38E-06	VCAPCD
	7440666	zinc	0.0224	1.64E-04	VCAPCD
Gas External Combustion: Heaters			EF	EF Units	Source
	75070	Acetaldehyde	1.21E-04	lb/mmbtu	SBCAPCD source tests
	107028	Acrolein	7.37E-07	lb/mmbtu	SBCAPCD source tests
	71432	Benzene	9.50E-05	lb/mmbtu	SBCAPCD source tests
	50000	Formaldehyde	2.06E-04	lb/mmbtu	SBCAPCD source tests
	110543	Hexane	5.67E-05	lb/mmbtu	SBCAPCD source tests
	115071	Propylene	2.53E-05	lb/mmbtu	SBCAPCD source tests
	108883	Toluene	2.30E-05	lb/mmbtu	SBCAPCD source tests
	1330207	Xylenes	8.50E-06	lb/mmbtu	SBCAPCD source tests
	7429905	Aluminum	5.20E-05	lb/mmbtu	SBCAPCD source tests
	7440360	Antimony	1.10E-06	lb/mmbtu	SBCAPCD source tests
	7440382	Arsenic and Compounds (inorganic)	3.03E-08	lb/mmbtu	SBCAPCD source tests
	7440393	Barium	2.37E-05	lb/mmbtu	SBCAPCD source tests
	7440417	Beryllium	1.13E-08	lb/mmbtu	SBCAPCD source tests
	7440439	Cadmium	4.07E-06	lb/mmbtu	SBCAPCD source tests
	7440473	Chromium	1.07E-06	lb/mmbtu	SBCAPCD source tests
	18540299	Chromium, hexavalent (and compounds)	1.37E-07	lb/mmbtu	SBCAPCD source tests
	7440508	Copper	1.03E-06	lb/mmbtu	SBCAPCD source tests
	7439921	Lead compounds (inorganic)	8.93E-07	lb/mmbtu	SBCAPCD source tests
	7439965	Manganese	2.20E-06	lb/mmbtu	SBCAPCD source tests
	7440020	Nickel	4.00E-07	lb/mmbtu	SBCAPCD source tests
	7723140	Phosphorus	7.47E-06	lb/mmbtu	SBCAPCD source tests
	7440224	Silver	1.90E-08	lb/mmbtu	SBCAPCD source tests
	7440622	Vanadium (fume or dust)	3.90E-08	lb/mmbtu	SBCAPCD source tests
	7440666	Zinc	2.50E-05	lb/mmbtu	SBCAPCD source tests
	91203	Naphthalene [PAH, POM]	4.98E-07	lb/mmbtu	SBCAPCD source tests
	208968	Acenaphthylene [PAH, POM]	2.88E-09	lb/mmbtu	SBCAPCD source tests
	83329	Acenaphthene [PAH, POM]	3.68E-09	lb/mmbtu	SBCAPCD source tests
	86737	Fluorene [PAH, POM]	1.54E-08	lb/mmbtu	SBCAPCD source tests
	85018	Phenanthrene [PAH, POM]	4.01E-08	lb/mmbtu	SBCAPCD source tests
	120127	Anthracene [PAH, POM]	4.95E-09	lb/mmbtu	SBCAPCD source tests
	206440	Fluoranthene [PAH, POM]	3.92E-09	lb/mmbtu	SBCAPCD source tests
	129000	Pyrene [PAH, POM]	4.01E-09	lb/mmbtu	SBCAPCD source tests
	218019	Chrysene [PAH, POM]	6.29E-10	lb/mmbtu	SBCAPCD source tests
	56553	Benz[a]anthracene [PAH, POM]	1.85E-09	lb/mmbtu	SBCAPCD source tests
	205992	Benzo[b]fluoranthene [PAH, POM]	2.31E-09	lb/mmbtu	SBCAPCD source tests
	207089	Benzo[k]fluoranthene [PAH, POM]	6.29E-10	lb/mmbtu	SBCAPCD source tests
	50328	Benzo[a]pyrene [PAH, POM]	6.29E-10	lb/mmbtu	SBCAPCD source tests
	193395	Indeno[1,2,3-cd]pyrene [PAH, POM]	6.29E-10	lb/mmbtu	SBCAPCD source tests
	53703	Dibenz[a,h]anthracene [PAH, POM]	6.29E-10	lb/mmbtu	SBCAPCD source tests
	191242	Benzo[g,h,i]perylene [PAH, POM]	6.29E-10	lb/mmbtu	SBCAPCD source tests
Gas Fired IC Engine					
	95636	1,2,4-Trimethylbenzene	1.43E-05	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	106990	Butadiene [1,3]	2.67E-04	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	91576	2-Methyl naphthalene [PAH, POM]	3.32E-05	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	83329	Acenaphthene [PAH, POM]	1.25E-06	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	208968	Acenaphthylene [PAH, POM]	5.53E-06	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	75070	Acetaldehyde	8.36E-03	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	107028	Acrolein	5.14E-03	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	71432	Benzene	4.40E-04	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	205992	Benzo[b]fluoranthene [PAH, POM]	1.66E-07	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	192972	Benzo[e]pyrene [PAH, POM]	4.15E-07	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	191242	Benzo[g,h,i]perylene [PAH, POM]	4.14E-07	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	108907	Chlorbenzene	3.04E-05	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	218019	Chrysene [PAH, POM]	6.93E-07	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	106934	Ethylene dibromide {1,2-Dibromoethane}	4.43E-05	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	206440	Fluoranthene [PAH, POM]	1.11E-06	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	86737	Fluorene [PAH, POM]	5.67E-06	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	50000	Formaldehyde	5.28E-02	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	67561	Methanol	2.50E-03	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	75092	Methylene chloride {Dichloromethane}	2.00E-05	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke

HAP Emission Factors

Type	CAS	Pollutant	EF, lbs/kgal	EF, lbs/mmbtu	Source
	110543	Hexane	1.11E-03	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	91203	Naphthalene [PAH, POM]	7.44E-05	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	1151	PAHs, total, w/o individ. components reported [PAH, POM]	2.69E-05	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	85018	Phenanthrene [PAH, POM]	1.04E-05	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	129000	Pyrene [PAH, POM]	1.36E-06	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	100425	Styrene	2.36E-05	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	108883	Toluene	4.08E-04	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	75014	Vinyl chloride	1.49E-05	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
	1330207	Xylenes	1.84E-04	lb/mmbtu	AP-42 section 3.2, lean burn 4 stroke
Crude Tanks 202 and 203					
	71432	Benzene	2.94E-04	lb/lb TOC	SBCAPCD Spreadsheets
	100414	Ethyl benzene	0.00E+00	lb/lb TOC	SBCAPCD Spreadsheets
	110543	Hexane	1.09E-01	lb/lb TOC	SBCAPCD Spreadsheets
	7783064	Hydrogen sulfide	3.55E-03	lb/lb TOC	SBCAPCD Spreadsheets
	108883	Toluene	7.13E-05	lb/lb TOC	SBCAPCD Spreadsheets
	1330207	Xylenes	0.00E+00	lb/lb TOC	SBCAPCD Spreadsheets
	106467	p-Dichlorobenzene {1,4-Dichlorobenzene}	1.28E-06	lb/lb TOC	SBCAPCD Spreadsheets
	67561	Methanol	6.95E-04	lb/lb TOC	SBCAPCD Spreadsheets
Crude Tank 204					
	71432	Benzene	8.55E-05	lb/lb TOC	SBCAPCD Spreadsheets
	100414	Ethyl benzene	0.00E+00	lb/lb TOC	SBCAPCD Spreadsheets
	110543	Hexane	1.71E-02	lb/lb TOC	SBCAPCD Spreadsheets
	7783064	Hydrogen sulfide	7.51E-04	lb/lb TOC	SBCAPCD Spreadsheets
	108883	Toluene	2.18E-05	lb/lb TOC	SBCAPCD Spreadsheets
	1330207	Xylenes	0.00E+00	lb/lb TOC	SBCAPCD Spreadsheets
	106467	p-Dichlorobenzene {1,4-Dichlorobenzene}	1.28E-06	lb/lb TOC	SBCAPCD Spreadsheets
	67561	Methanol	6.95E-04	lb/lb TOC	SBCAPCD Spreadsheets
Pig Receiver - Emulsion					
			Annual Avg	Peak Hour	
	71432	Benzene	2.53E-04	4.52E-04	lb/lb TOC, SBCAPCD Spreadsheets
	108883	Toluene	2.37E-04	2.37E-04	lb/lb TOC, SBCAPCD Spreadsheets
	100414	Ethyl benzene	6.45E-05	6.45E-05	lb/lb TOC, SBCAPCD Spreadsheets
	1330207	Xylenes	5.10E-05	5.10E-05	lb/lb TOC, SBCAPCD Spreadsheets
	7783064	Hydrogen Sulfide	5.97E-03	1.19E-02	lb/lb TOC, SBCAPCD Spreadsheets
	110543	Hexane	1.09E-03	1.09E-03	lb/lb TOC, SBCAPCD Spreadsheets
Pig Receiver - Utility gas					
			Annual Avg	Peak Hour	
	71432	Benzene	9.43E-06	9.43E-06	lb/lb TOC, SBCAPCD Spreadsheets
	108883	Toluene	1.11E-05	1.11E-05	lb/lb TOC, SBCAPCD Spreadsheets
	100414	Ethyl benzene	1.28E-05	1.28E-05	lb/lb TOC, SBCAPCD Spreadsheets
	1330207	Xylenes	2.56E-05	2.56E-05	lb/lb TOC, SBCAPCD Spreadsheets
	7783064	Hydrogen Sulfide	6.11E-06	1.22E-05	lb/lb TOC, SBCAPCD Spreadsheets
	110543	Hexane	0.00E+00	0.00E+00	lb/lb TOC, SBCAPCD Spreadsheets
Pig Receiver - Produced gas					
			Annual Avg	Peak Hour	
	71432	Benzene	8.61E-04	2.24E-03	lb/lb TOC, SBCAPCD Spreadsheets
	108883	Toluene	6.06E-04	6.06E-04	lb/lb TOC, SBCAPCD Spreadsheets
	100414	Ethyl benzene	7.03E-05	7.03E-05	lb/lb TOC, SBCAPCD Spreadsheets
	1330207	Xylenes	1.10E-04	1.10E-04	lb/lb TOC, SBCAPCD Spreadsheets
	7783064	Hydrogen Sulfide	3.87E-02	3.87E-02	lb/lb TOC, SBCAPCD Spreadsheets
	110543	Hexane	1.56E-03	1.56E-03	lb/lb TOC, SBCAPCD Spreadsheets
Pig Receiver - Seep gas					
			Annual Avg	Peak Hour	
	71432	Benzene	9.98E-06	9.98E-06	lb/lb TOC, SBCAPCD Spreadsheets
	108883	Toluene	1.18E-05	1.18E-05	lb/lb TOC, SBCAPCD Spreadsheets
	100414	Ethyl benzene	1.36E-05	1.36E-05	lb/lb TOC, SBCAPCD Spreadsheets
	1330207	Xylenes	2.71E-05	2.71E-05	lb/lb TOC, SBCAPCD Spreadsheets
	7783064	Hydrogen Sulfide	5.24E-06	1.05E-05	lb/lb TOC, SBCAPCD Spreadsheets
	110543	Hexane	0.00E+00	0.00E+00	lb/lb TOC, SBCAPCD Spreadsheets
Sump and Wash Tanks					
			Annual Avg	Peak Hour	
	71432	Benzene	2.53E-04	4.52E-04	lb/lb TOC, SBCAPCD Spreadsheets
	108883	Toluene	2.37E-04	2.37E-04	lb/lb TOC, SBCAPCD Spreadsheets
	100414	Ethyl benzene	6.43E-05	6.43E-05	lb/lb TOC, SBCAPCD Spreadsheets
	1330207	Xylenes	5.08E-05	5.08E-05	lb/lb TOC, SBCAPCD Spreadsheets
	110543	Hexane	1.09E-03	1.09E-03	lb/lb TOC, SBCAPCD Spreadsheets
	7783064	Hydrogen sulfide	5.97E-03	1.19E-02	lb/lb TOC, SBCAPCD Spreadsheets
LPG/NGL Loading Racks					
			LPG	NGL	
	71432	Benzene	2.50E-05	1.56E-04	lb/lb TOC, SBCAPCD Spreadsheets
	100414	Ethyl benzene	0.00E+00	0.00E+00	lb/lb TOC, SBCAPCD Spreadsheets
	110543	Hexane	5.15E-03	4.33E-02	lb/lb TOC, SBCAPCD Spreadsheets
	7783064	Hydrogen sulfide	2.35E-06	2.07E-02	lb/lb TOC, SBCAPCD Spreadsheets
	108883	Toluene	7.85E-06	2.36E-05	lb/lb TOC, SBCAPCD Spreadsheets
	1330207	Xylenes	0.00E+00	0.00E+00	lb/lb TOC, SBCAPCD Spreadsheets
Coatings					
			Annual	Peak Hour	
	100414	Ethyl benzene	2.11E-01	2.11E-01	lb/gal use, peak hr is 1/2.5 times annual use, SBCAPCD Spreadsheets
	91203	Naphthalene [PAH, POM]	3.38E-04	3.38E-04	lb/gal use, peak hr is 1/2.5 times annual use, SBCAPCD Spreadsheets
	108883	Toluene	1.76E-01	1.76E-01	lb/gal use, peak hr is 1/2.5 times annual use, SBCAPCD Spreadsheets

HAP Emission Factors

Type	CAS	Pollutant	EF, lbs/kgal	EF, lbs/mmbtu	Source
	95636	1,2,4-Trimethylbenzene	2.15E-03	2.15E-03	lb/gal use, peak hr is 1/2.5 times annual use, SBCAPCD Spreadsheets
	1330207	Xylenes	3.65E-01	3.65E-01	lb/gal use, peak hr is 1/2.5 times annual use, SBCAPCD Spreadsheets
	108907	Chlorbenzene	2.51E-04	2.51E-04	lb/gal use, peak hr is 1/2.5 times annual use, SBCAPCD Spreadsheets
	78933	Methyl ethyl ketone {2-Butanone}	4.47E-02	4.47E-02	lb/gal use, peak hr is 1/2.5 times annual use, SBCAPCD Spreadsheets
	7631869	Crystalline silica	2.10E+00	2.10E+00	lb/gal use, peak hr is 1/2.5 times annual use, SBCAPCD Spreadsheets
Solvents (not pig cleaning)					
			Annual	Peak Hour	
	100414	Ethyl benzene	2.21E-02	2.27E-02	lb/gal use, peak hr just lbs/hr, SBCAPCD Spreadsheets
	91203	Naphthalene [PAH, POM]	2.21E-02	2.27E-02	lb/gal use, peak hr just lbs/hr, SBCAPCD Spreadsheets
	108883	Toluene	3.15E-02	3.25E-02	lb/gal use, peak hr just lbs/hr, SBCAPCD Spreadsheets
	95636	1,2,4-Trimethylbenzene	1.41E-01	1.45E-01	lb/gal use, peak hr just lbs/hr, SBCAPCD Spreadsheets
	1330207	Xylenes	2.41E-01	2.48E-01	lb/gal use, peak hr just lbs/hr, SBCAPCD Spreadsheets
	108907	Chlorbenzene	1.64E-02	1.69E-02	lb/gal use, peak hr just lbs/hr, SBCAPCD Spreadsheets
	78933	Methyl ethyl ketone {2-Butanone}	0.00E+00	0.00E+00	lb/gal use, peak hr just lbs/hr, SBCAPCD Spreadsheets
	7631869	Crystalline silica	0.00E+00	0.00E+00	lb/gal use, peak hr just lbs/hr, SBCAPCD Spreadsheets
Pig Cleaning					
			Annual	Peak Hour	
	100414	Ethyl benzene	1.58E-04	2.27E-03	lb/pig event, peak hour in lb/hr, SBCAPCD Spreadsheets
	91203	Naphthalene [PAH, POM]	1.58E-04	2.27E-03	lb/pig event, peak hour in lb/hr, SBCAPCD Spreadsheets
	108883	Toluene	2.25E-04	3.25E-03	lb/pig event, peak hour in lb/hr, SBCAPCD Spreadsheets
	95636	1,2,4-Trimethylbenzene	1.00E-03	1.45E-02	lb/pig event, peak hour in lb/hr, SBCAPCD Spreadsheets
	1330207	Xylenes	1.72E-03	2.48E-02	lb/pig event, peak hour in lb/hr, SBCAPCD Spreadsheets
	108907	Chlorbenzene	1.17E-04	1.69E-03	lb/pig event, peak hour in lb/hr, SBCAPCD Spreadsheets
	78933	Methyl ethyl ketone {2-Butanone}	0.00E+00	0.00E+00	lb/pig event, peak hour in lb/hr, SBCAPCD Spreadsheets
	7631869	Crystalline silica	0.00E+00	0.00E+00	lb/pig event, peak hour in lb/hr, SBCAPCD Spreadsheets
Flare, Non refinery			Annual		
	71432	Benzene	1.54E-04		lb/mmbtu, SCAQMD 12/2014 and assumes 1033 btu/scf
	50000	Formaldehyde	1.13E-03		lb/mmbtu, SCAQMD 12/2014 and assumes 1033 btu/scf
	1151	PAHs, total, w/o individ. components reported [PAH, POM]	2.90E-06		lb/mmbtu, SCAQMD 12/2014 and assumes 1033 btu/scf
	91203	Naphthalene [PAH, POM]	1.06E-05		lb/mmbtu, SCAQMD 12/2014 and assumes 1033 btu/scf
	75070	Acetaldehyde	3.95E-05		lb/mmbtu, SCAQMD 12/2014 and assumes 1033 btu/scf
	107028	Acrolein	6.32E-06		lb/mmbtu, SCAQMD 12/2014 and assumes 1033 btu/scf
	100414	ethyl benzene	3.16E-05		lb/mmbtu, SCAQMD 12/2014 and assumes 1033 btu/scf
	75569	Propylene oxide	2.87E-05		lb/mmbtu, SCAQMD 12/2014 and assumes 1033 btu/scf
	108883	Toluene	1.29E-04		lb/mmbtu, SCAQMD 12/2014 and assumes 1033 btu/scf
	1330207	Xylenes	6.32E-05		lb/mmbtu, SCAQMD 12/2014 and assumes 1033 btu/scf
Fugitives Holly and Sample Point 1					
			Annual	Hourly	
	71432	Benzene	861	2241	ppmw, From APCD Spreadsheets 2012 and measured ppmw
	108883	Toluene	606	606	ppmw, From APCD Spreadsheets 2012 and measured ppmw
	100414	ethyl benzene	70	70	ppmw, From APCD Spreadsheets 2012 and measured ppmw
	1330207	Xylenes	110	110	ppmw, From APCD Spreadsheets 2012 and measured ppmw
	110543	Hexane	1558	1558	ppmw, From APCD Spreadsheets 2012 and measured ppmw
	7783064	Hydrogen sulfide	25471	38693	ppmw, From APCD Spreadsheets 2012 and measured ppmw
	106467	p-Dichlorobenzene {1,4-Dichlorobenzene}	7	7	ppmw, From APCD Spreadsheets 2012 and measured ppmw
	67561	Methanol	438	438	ppmw, From APCD Spreadsheets 2012 and measured ppmw

South Ellwood Crude Tank # 1 T-101

FIXED ROOF TANK CALCULATION (AP-42: Chapter 7 Method)

from PTO 7904R10

Basic Input Data	
liquid {1:G13, 2:G10, 3:G7, 4:C, 5:JP, 6:ker, 7:O2, 8:O6} =	4
liquid TVP =	0.775
if TVP is entered, enter TVP temperature (°F) =	73
tank heated {yes, no} =	no
if tank is heated, enter temp (°F) =	
vapor recovery system present? {yes, no} =	no
is this a wash tank? {yes, no} =	no
will flashing losses occur in this tank? {yes, no} =	no
breather vent pressure setting range (psi) (def = 0.06):	0

Permit:	PTO 7904R.10
Date:	02/16/16
Tank:	Crude Tank #101
Name:	EOF
Filename:	
District:	Santa Barbara
Version:	Tank-2b.xls

Tank Data		
diameter (feet) =		20
capacity (enter barrels in first col, gals will compute) =	402	16,884
conical or dome roof? {c, d} =		c
shell height (feet) =		12
roof height (def = 1):		0
ave liq height (feet):		4.43
color {1:Spec Al, 2:Diff Al, 3:Lite, 4:Med, 5:Rd, 6:Wh} =		4
condition {1: Good, 2: Poor} =		1
upstream pressure (psig) (def = 0 when no flashing occurs):		0

Liquid Data	A	B
maximum daily throughput (bopd) =		-
Ann thruput (gal): (enter value in Column A if not max PTE)	0.000E+00	0.000E+00
RVP (psia):		1.51736
°API gravity =		22

Paint Factor Matrix		
	paint condition	
paint color	good	poor
spec alum	0.39	0.49
diff alum	0.60	0.68
lite grey	0.54	0.63
med grey	0.68	0.74
red	0.89	0.91
white	0.17	0.34

Molecular Weight Matrix	
liquid	mol wt
gas rvp 13	62
gas rvp 10	66
gas rvp 7	68
crude oil	50
JP -4	80
jet kerosene	130
fuel oil 2	130
fuel oil 6	190

Computed Values		
roof outage [1] (feet):		0
vapor space volume [2] (cubic feet):		2,378
turnovers [3] :		0
turnover factor [4] :		1
paint factor [5] :		0.68
surface temperatures (°R, °F)		
average [6] :	527.2	67.2
maximum [7] :	539	79
minimum [8] :	515.4	55.4
product factor [9] :		0.75
diurnal vapor ranges		
temperature [10] (fahrenheit degrees):		47.2
vapor pressure [11] (psia):		0.386613
molecular weight [12] (lb/lb-mol):		50
TVP [13] (psia) [adjusted for ave liquid surface temp]:		0.67415
vapor density [14] (lb/cubic foot):		0.005958
vapor expansion factor [15] :		0.117
vapor saturation factor [16] :		0.787107
vented vapor volume (scf/bbl):		8
fraction ROG - flashing losses:		0.308
fraction ROG - evaporative losses:		0.885

Adjusted TVP Matrix	
liquid	TVP value
gas rvp 13	7.908
gas rvp 10	5.56
gas rvp 7	3.932
crude oil	0.67415
JP -4	1.516
jet kerosene	0.0103
fuel oil 2	0.009488
fuel oil 6	0.0000472

RVP Matrix	
liquid	RVP value
gas rvp 13	13
gas rvp 10	10
gas rvp 7	7
crude oil	1.51736194
JP -4	2.7
jet kerosene	0.029
fuel oil 2	0.022
fuel oil 6	0.00019

Long-Term VRU_Eff = 95.00%

Short-Term VRU_Eff = 95.00%

Emissions	Uncontrolled ROC emissions			Controlled ROC emissions		
	lb/hr	lb/day	ton/year	lb/hr	lb/day	ton/year
breathing loss [17] =	0.05	1.15	0.21	0.05	1.15	0.21
working loss [18] =	0.00	0.00	0.00	0.00	0.00	0.00
flashing loss [19] =	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS =	**0.05**	**1.15**	**0.21**	**0.05**	**1.15**	**0.21**

South Ellwood Crude Tank # 1 T-101: PROPOSED PROJECT

FIXED ROOF TANK CALCULATION (AP-42: Chapter 7 Method)

from PTO 7904R10

Basic Input Data	
liquid {1:G13, 2:G10, 3:G7, 4:C, 5:JP, 6:ker, 7:O2, 8:O6} =	4
liquid TVP =	0.775
if TVP is entered, enter TVP temperature (°F) =	73
tank heated {yes, no} =	no
if tank is heated, enter temp (°F) =	
vapor recovery system present? {yes, no} =	no
is this a wash tank? {yes, no} =	no
will flashing losses occur in this tank? {yes, no} =	no
breather vent pressure setting range (psi) (def = 0.06):	0

Permit:	PTO 7904R.10
Date:	02/16/16
Tank:	Crude Tank #101
Name:	EOF
Filename:	
District:	Santa Barbara
Version:	Tank-2b.xls

Tank Data		
diameter (feet) =		20
capacity (enter barrels in first col, gals will compute) =	402	16,884
conical or dome roof? {c, d} =		c
shell height (feet) =		12
roof height (def = 1):		0
ave liq height (feet):		4.43
color {1:Spec Al, 2:Diff Al, 3:Lite, 4:Med, 5:Rd, 6:Wh} =		4
condition {1: Good, 2: Poor} =		1
upstream pressure (psig) (def = 0 when no flashing occurs):		0

Liquid Data	A	B
maximum daily throughput (bopd) =		-
Ann thruput (gal): (enter value in Column A if not max PTE)	2.500E+02	0.000E+00
RVP (psia):		1.51736
°API gravity =		22

Paint Factor Matrix		
	paint condition	
paint color	good	poor
spec alum	0.39	0.49
diff alum	0.60	0.68
lite grey	0.54	0.63
med grey	0.68	0.74
red	0.89	0.91
white	0.17	0.34

Molecular Weight Matrix	
liquid	mol wt
gas rvp 13	62
gas rvp 10	66
gas rvp 7	68
crude oil	50
JP -4	80
jet kerosene	130
fuel oil 2	130
fuel oil 6	190

Computed Values		
roof outage [1] (feet):		0
vapor space volume [2] (cubic feet):		2,378
turnovers [3] :		0
turnover factor [4] :		1
paint factor [5] :		0.68
surface temperatures (°R, °F)		
average [6] :	527.2	67.2
maximum [7] :	539	79
minimum [8] :	515.4	55.4
product factor [9] :		0.75
diurnal vapor ranges		
temperature [10] (fahrenheit degrees):		47.2
vapor pressure [11] (psia):		0.386613
molecular weight [12] (lb/lb-mol):		50
TVP [13] (psia) [adjusted for ave liquid surface temp]:		0.67415
vapor density [14] (lb/cubic foot):		0.005958
vapor expansion factor [15] :		0.117
vapor saturation factor [16] :		0.787107
vented vapor volume (scf/bbl):		8
fraction ROG - flashing losses:		0.308
fraction ROG - evaporative losses:		0.885

Adjusted TVP Matrix	
liquid	TVP value
gas rvp 13	7.908
gas rvp 10	5.56
gas rvp 7	3.932
crude oil	0.67415
JP -4	1.516
jet kerosene	0.0103
fuel oil 2	0.009488
fuel oil 6	0.0000472

RVP Matrix	
liquid	RVP value
gas rvp 13	13
gas rvp 10	10
gas rvp 7	7
crude oil	1.51736194
JP -4	2.7
jet kerosene	0.029
fuel oil 2	0.022
fuel oil 6	0.00019

Long-Term VRU_Eff = 95.00%

Short-Term VRU_Eff = 95.00%

Emissions	Uncontrolled ROC emissions			Controlled ROC emissions		
	lb/hr	lb/day	ton/year	lb/hr	lb/day	ton/year
breathing loss [17] =	0.05	1.15	0.21	0.05	1.15	0.21
working loss [18] =	0.00	0.00	0.00	0.00	0.00	0.00
flashing loss [19] =	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS =	**0.05**	**1.15**	**0.21**	**0.05**	**1.15**	**0.21**

South Ellwood Crude Tank # 1 T-202

FIXED ROOF TANK CALCULATION (AP-42: Chapter 7 Method)

from PTO 7904R10

Basic Input Data	
liquid {1:G13, 2:G10, 3:G7, 4:C, 5:JP, 6:ker, 7:O2, 8:O6} =	4
liquid TVP =	2.8
if TVP is entered, enter TVP temperature (°F) =	64
tank heated {yes, no} =	no
if tank is heated, enter temp (°F) =	
vapor recovery system present? {yes, no} =	yes
is this a wash tank? {yes, no} =	no
will flashing losses occur in this tank? {yes, no} =	no
breather vent pressure setting range (psi) (def = 0.06):	0.06

Permit:	PTO 7904R.10
Date:	02/16/16
Tank:	Crude Tank #202
Name:	EOF
Filename:	
District:	Santa Barbara
Version:	Tank-2b.xls

Tank Data		
diameter (feet) =		21.83
capacity (enter barrels in first col, gals will compute) =	2,000	84,000
conical or dome roof? {c, d} =		d
shell height (feet) =		30
roof height (def = 1):		1
ave liq height (feet):		15
color {1:Spec Al, 2:Diff Al, 3:Lite, 4:Med, 5:Rd, 6:Wh} =		4
condition {1: Good, 2: Poor} =		1
upstream pressure (psig) (def = 0 when no flashing occurs):		0

Liquid Data	A	B
maximum daily throughput (bopd) =		3,400
Ann thruput (gal): (enter value in Column A if not max PTE)		5.212E+07
RVP (psia):		4.60377
°API gravity =		7.1

Paint Factor Matrix	paint condition	
paint color	good	poor
spec alum	0.39	0.49
diff alum	0.60	0.68
lite grey	0.54	0.63
med grey	0.68	0.74
red	0.89	0.91
white	0.17	0.34

Molecular Weight Matrix	
liquid	mol wt
gas rvp 13	62
gas rvp 10	66
gas rvp 7	68
crude oil	50
JP -4	80
jet kerosene	130
fuel oil 2	130
fuel oil 6	190

Computed Values			
roof outage [1] (feet):		0.5	
vapor space volume [2] (cubic feet):		5,801	
turnovers [3] :		620.5	x
turnover factor [4] :		0.22	x
paint factor [5] :		0.68	
surface temperatures (°R, °F)			
average [6] :	527.2	67.2	
maximum [7] :	539	79	
minimum [8] :	515.4	55.4	
product factor [9] :		0.75	
diurnal vapor ranges			
temperature [10] (fahrenheit degrees):		47.2	
vapor pressure [11] (psia):		1.36788	
molecular weight [12] (lb/lb-mol):		50	
TVP [13] (psia) [adjusted for ave liquid surface temp]:		2.98089	
vapor density [14] (lb/cubic foot):		0.026345	
vapor expansion factor [15] :		0.201	
vapor saturation factor [16] :		0.289956	
vented vapor volume (scf/bbl):		8	
fraction ROG - flashing losses:		0.308	
fraction ROG - evaporative losses:		0.885	

Adjusted TVP Matrix	
liquid	TVP value
gas rvp 13	7.908
gas rvp 10	5.56
gas rvp 7	3.932
crude oil	2.98089
JP -4	1.516
jet kerosene	0.0103
fuel oil 2	0.009488
fuel oil 6	0.0000472

RVP Matrix	
liquid	RVP value
gas rvp 13	13
gas rvp 10	10
gas rvp 7	7
crude oil	4.603769939
JP -4	2.7
jet kerosene	0.029
fuel oil 2	0.022
fuel oil 6	0.00019

Long-Term VRU_Eff = 95.00%

Short-Term VRU_Eff = 95.00%

Emissions	Uncontrolled ROC emissions			Controlled ROC emissions		
	lb/hr	lb/day	ton/year	lb/hr	lb/day	ton/year
breathing loss [17] =	0.33	7.88	1.44	0.02	0.39	0.07
working loss [18] =	3.08	74.00	13.50	0.15	3.70	0.68
flashing loss [19] =	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS =	**3.41**	**81.88**	**14.94**	**0.17**	**4.09**	**0.75**

South Ellwood Crude Tank # 1 T-202: PROPOSED PROJECT

FIXED ROOF TANK CALCULATION (AP-42: Chapter 7 Method)

from PTO 7904R10

Basic Input Data	
liquid {1:G13, 2:G10, 3:G7, 4:C, 5:JP, 6:ker, 7:O2, 8:O6} =	4
liquid TVP =	2.8
if TVP is entered, enter TVP temperature (°F) =	64
tank heated {yes, no} =	no
if tank is heated, enter temp (°F) =	
vapor recovery system present? {yes, no} =	yes
is this a wash tank? {yes, no} =	no
will flashing losses occur in this tank? {yes, no} =	no
breather vent pressure setting range (psi) (def = 0.06):	0.06

Permit:	PTO 7904R.10
Date:	02/16/16
Tank:	Crude Tank #202
Name:	EOF
Filename:	
District:	Santa Barbara
Version:	Tank-2b.xls

Tank Data		
diameter (feet) =		21.83
capacity (enter barrels in first col, gals will compute) =	2,000	84,000
conical or dome roof? {c, d} =		d
shell height (feet) =		30
roof height (def = 1):		1
ave liq height (feet):		15
color {1:Spec Al, 2:Diff Al, 3:Lite, 4:Med, 5:Rd, 6:Wh} =		4
condition {1: Good, 2: Poor} =		1
upstream pressure (psig) (def = 0 when no flashing occurs):		0

Paint Factor Matrix	paint condition	
paint color	good	poor
spec alum	0.39	0.49
diff alum	0.60	0.68
lite grey	0.54	0.63
med grey	0.68	0.74
red	0.89	0.91
white	0.17	0.34

Molecular Weight Matrix	
liquid	mol wt
gas rvp 13	62
gas rvp 10	66
gas rvp 7	68
crude oil	50
JP -4	80
jet kerosene	130
fuel oil 2	130
fuel oil 6	190

Liquid Data	A	B
maximum daily throughput (bopd) =		13,000
Ann thruput (gal): (enter value in Column A if not max PTE)		1.993E+08
RVP (psia):		4.60377
°API gravity =		7.1

Computed Values			
roof outage [1] (feet):		0.5	
vapor space volume [2] (cubic feet):		5,801	
turnovers [3] :		2372.5	x
turnover factor [4] :		0.18	x
paint factor [5] :		0.68	
surface temperatures (°R, °F)			
average [6] :	527.2	67.2	
maximum [7] :	539	79	
minimum [8] :	515.4	55.4	
product factor [9] :		0.75	
diurnal vapor ranges			
temperature [10] (fahrenheit degrees):		47.2	
vapor pressure [11] (psia):		1.36788	
molecular weight [12] (lb/lb-mol):		50	
TVP [13] (psia) [adjusted for ave liquid surface temp]:		2.98089	
vapor density [14] (lb/cubic foot):		0.026345	
vapor expansion factor [15] :		0.201	
vapor saturation factor [16] :		0.289956	
vented vapor volume (scf/bbl):		8	
fraction ROG - flashing losses:		0.308	
fraction ROG - evaporative losses:		0.885	

Adjusted TVP Matrix	
liquid	TVP value
gas rvp 13	7.908
gas rvp 10	5.56
gas rvp 7	3.932
crude oil	2.98089
JP -4	1.516
jet kerosene	0.0103
fuel oil 2	0.009488
fuel oil 6	0.0000472

RVP Matrix	
liquid	RVP value
gas rvp 13	13
gas rvp 10	10
gas rvp 7	7
crude oil	4.603769939
JP -4	2.7
jet kerosene	0.029
fuel oil 2	0.022
fuel oil 6	0.00019

Long-Term VRU_Eff = 95.00%

Short-Term VRU_Eff = 95.00%

Emissions	Uncontrolled ROC emissions			Controlled ROC emissions		
	lb/hr	lb/day	ton/year	lb/hr	lb/day	ton/year
breathing loss [17] =	0.33	7.88	1.44	0.02	0.39	0.07
working loss [18] =	9.65	231.49	42.25	0.48	11.57	2.11
flashing loss [19] =	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS =	**9.97**	**239.37**	**43.69**	**0.50**	**11.97**	**2.18**

South Ellwood Crude Tank # 1 T-203

FIXED ROOF TANK CALCULATION (AP-42: Chapter 7 Method)

from PTO 7904R10

Basic Input Data	
liquid {1:G13, 2:G10, 3:G7, 4:C, 5:JP, 6:ker, 7:O2, 8:O6} =	4
liquid TVP =	2.8
if TVP is entered, enter TVP temperature (°F) =	64
tank heated {yes, no} =	no
if tank is heated, enter temp (°F) =	
vapor recovery system present? {yes, no} =	yes
is this a wash tank? {yes, no} =	no
will flashing losses occur in this tank? {yes, no} =	no
breather vent pressure setting range (psi) (def = 0.06):	0.06

Permit:	PTO 7904R.10
Date:	02/16/16
Tank:	Crude Tank #203
Name:	EOF
Filename:	
District:	Santa Barbara
Version:	Tank-2b.xls

Tank Data		
diameter (feet) =		21.83
capacity (enter barrels in first col, gals will compute) =	2,000	84,000
conical or dome roof? {c, d} =		d
shell height (feet) =		30
roof height (def = 1):		1
ave liq height (feet):		15
color {1:Spec Al, 2:Diff Al, 3:Lite, 4:Med, 5:Rd, 6:Wh} =		4
condition {1: Good, 2: Poor} =		1
upstream pressure (psig) (def = 0 when no flashing occurs):		0

Liquid Data	A	B
maximum daily throughput (bopd) =		3,400
Ann thruput (gal): (enter value in Column A if not max PTE)		5.212E+07
RVP (psia):		4.60377
°API gravity =		7.1

Paint Factor Matrix	paint condition	
paint color	good	poor
spec alum	0.39	0.49
diff alum	0.60	0.68
lite grey	0.54	0.63
med grey	0.68	0.74
red	0.89	0.91
white	0.17	0.34

Molecular Weight Matrix	
liquid	mol wt
gas rvp 13	62
gas rvp 10	66
gas rvp 7	68
crude oil	50
JP -4	80
jet kerosene	130
fuel oil 2	130
fuel oil 6	190

Computed Values		
roof outage [1] (feet):		0.5
vapor space volume [2] (cubic feet):		5,801
turnovers [3] :		620.5
turnover factor [4] :		0.22
paint factor [5] :		0.68
surface temperatures (°R, °F)		
average [6] :	527.2	67.2
maximum [7] :	539	79
minimum [8] :	515.4	55.4
product factor [9] :		0.75
diurnal vapor ranges		
temperature [10] (fahrenheit degrees):		47.2
vapor pressure [11] (psia):		1.36788
molecular weight [12] (lb/lb-mol):		50
TVP [13] (psia) [adjusted for ave liquid surface temp]:		2.98089
vapor density [14] (lb/cubic foot):		0.026345
vapor expansion factor [15] :		0.201
vapor saturation factor [16] :		0.289956
vented vapor volume (scf/bbl):		8
fraction ROG - flashing losses:		0.308
fraction ROG - evaporative losses:		0.885

Adjusted TVP Matrix	
liquid	TVP value
gas rvp 13	7.908
gas rvp 10	5.56
gas rvp 7	3.932
crude oil	2.98089
JP -4	1.516
jet kerosene	0.0103
fuel oil 2	0.009488
fuel oil 6	0.0000472

RVP Matrix	
liquid	RVP value
gas rvp 13	13
gas rvp 10	10
gas rvp 7	7
crude oil	4.603769939
JP -4	2.7
jet kerosene	0.029
fuel oil 2	0.022
fuel oil 6	0.00019

Long-Term VRU_Eff = 95.00%

Short-Term VRU_Eff = 95.00%

Emissions	Uncontrolled ROC emissions			Controlled ROC emissions		
	lb/hr	lb/day	ton/year	lb/hr	lb/day	ton/year
breathing loss [17] =	0.33	7.88	1.44	0.02	0.39	0.07
working loss [18] =	3.08	74.00	13.50	0.15	3.70	0.68
flashing loss [19] =	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS =	**3.41**	**81.88**	**14.94**	**0.17**	**4.09**	**0.75**

South Ellwood Crude Tank # 1 T-203: PROPOSED PROJECT

FIXED ROOF TANK CALCULATION (AP-42: Chapter 7 Method)

from PTO 7904R10

Basic Input Data	
liquid {1:G13, 2:G10, 3:G7, 4:C, 5:JP, 6:ker, 7:O2, 8:O6} =	4
liquid TVP =	2.8
if TVP is entered, enter TVP temperature (°F) =	64
tank heated {yes, no} =	no
if tank is heated, enter temp (°F) =	
vapor recovery system present? {yes, no} =	yes
is this a wash tank? {yes, no} =	no
will flashing losses occur in this tank? {yes, no} =	no
breather vent pressure setting range (psi) (def = 0.06):	0.06

Permit:	PTO 7904R.10
Date:	02/16/16
Tank:	Crude Tank #203
Name:	EOF
Filename:	
District:	Santa Barbara
Version:	Tank-2b.xls

Tank Data		
diameter (feet) =		21.83
capacity (enter barrels in first col, gals will compute) =	2,000	84,000
conical or dome roof? {c, d} =		d
shell height (feet) =		30
roof height (def = 1):		1
ave liq height (feet):		15
color {1:Spec Al, 2:Diff Al, 3:Lite, 4:Med, 5:Rd, 6:Wh} =		4
condition {1: Good, 2: Poor} =		1
upstream pressure (psig) (def = 0 when no flashing occurs):		0

Liquid Data	A	B
maximum daily throughput (bopd) =		13,000
Ann thruput (gal): (enter value in Column A if not max PTE)		1.993E+08
RVP (psia):		4.60377
°API gravity =		7.1

Computed Values		
roof outage [1] (feet):		0.5
vapor space volume [2] (cubic feet):		5,801
turnovers [3] :		2372.5
turnover factor [4] :		0.18
paint factor [5] :		0.68
surface temperatures (°R, °F)		
average [6] :	527.2	67.2
maximum [7] :	539	79
minimum [8] :	515.4	55.4
product factor [9] :		0.75
diurnal vapor ranges		
temperature [10] (fahrenheit degrees):		47.2
vapor pressure [11] (psia):		1.36788
molecular weight [12] (lb/lb-mol):		50
TVP [13] (psia) [adjusted for ave liquid surface temp]:		2.98089
vapor density [14] (lb/cubic foot):		0.026345
vapor expansion factor [15] :		0.201
vapor saturation factor [16] :		0.289956
vented vapor volume (scf/bbl):		8
fraction ROG - flashing losses:		0.308
fraction ROG - evaporative losses:		0.885

Paint Factor Matrix

paint color	paint condition good	paint condition poor
spec alum	0.39	0.49
diff alum	0.60	0.68
lite grey	0.54	0.63
med grey	0.68	0.74
red	0.89	0.91
white	0.17	0.34

Molecular Weight Matrix

liquid	mol wt
gas rvp 13	62
gas rvp 10	66
gas rvp 7	68
crude oil	50
JP -4	80
jet kerosene	130
fuel oil 2	130
fuel oil 6	190

Adjusted TVP Matrix

liquid	TVP value
gas rvp 13	7.908
gas rvp 10	5.56
gas rvp 7	3.932
crude oil	2.98089
JP -4	1.516
jet kerosene	0.0103
fuel oil 2	0.009488
fuel oil 6	0.0000472

RVP Matrix

liquid	RVP value
gas rvp 13	13
gas rvp 10	10
gas rvp 7	7
crude oil	4.603769939
JP -4	2.7
jet kerosene	0.029
fuel oil 2	0.022
fuel oil 6	0.00019

Long-Term VRU_Eff =	95.00%
Short-Term VRU_Eff =	95.00%

Emissions	Uncontrolled ROC emissions lb/hr	lb/day	ton/year	Controlled ROC emissions lb/hr	lb/day	ton/year
breathing loss [17] =	0.33	7.88	1.44	0.02	0.39	0.07
working loss [18] =	9.65	231.49	42.25	0.48	11.57	2.11
flashing loss [19] =	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS =	**9.97**	**239.37**	**43.69**	**0.50**	**11.97**	**2.18**

South Ellwood Crude Tank # 1 T-204

FIXED ROOF TANK CALCULATION (AP-42: Chapter 7 Method)

from PTO 7904R10

Basic Input Data	
liquid {1:G13, 2:G10, 3:G7, 4:C, 5:JP, 6:ker, 7:O2, 8:O6} =	4
liquid TVP =	2.8
if TVP is entered, enter TVP temperature (°F) =	64
tank heated {yes, no} =	no
if tank is heated, enter temp (°F) =	
vapor recovery system present? {yes, no} =	yes
is this a wash tank? {yes, no} =	no
will flashing losses occur in this tank? {yes, no} =	no
breather vent pressure setting range (psi) (def = 0.06):	0.06

Permit:	PTO 7904R.10
Date:	02/16/16
Tank:	Crude Tank #204
Name:	EOF
Filename:	
District:	Santa Barbara
Version:	Tank-2b.xls

Tank Data		
diameter (feet) =		26.75
capacity (enter barrels in first col, gals will compute) =	2,000	84,000
conical or dome roof? {c, d} =		d
shell height (feet) =		30
roof height (def = 1):		1
ave liq height (feet):		15
color {1:Spec Al, 2:Diff Al, 3:Lite, 4:Med, 5:Rd, 6:Wh} =		4
condition {1: Good, 2: Poor} =		1
upstream pressure (psig) (def = 0 when no flashing occurs):		0

Liquid Data	A	B
maximum daily throughput (bopd) =		-
Ann thruput (gal): (enter value in Column A if not max PTE)		0.000E+00
RVP (psia):		4.60377
°API gravity =		7.1

Computed Values		
roof outage [1] (feet):		0.5
vapor space volume [2] (cubic feet):		8,711
turnovers [3] :		0
turnover factor [4] :		1
paint factor [5] :		0.68
surface temperatures (°R, °F)		
average [6] :	527.2	67.2
maximum [7] :	539	79
minimum [8] :	515.4	55.4
product factor [9] :		0.75
diurnal vapor ranges		
temperature [10] (fahrenheit degrees):		47.2
vapor pressure [11] (psia):		1.36788
molecular weight [12] (lb/lb-mol):		50
TVP [13] (psia) [adjusted for ave liquid surface temp]:		2.98089
vapor density [14] (lb/cubic foot):		0.026345
vapor expansion factor [15] :		0.201
vapor saturation factor [16] :		0.289956
vented vapor volume (scf/bbl):		8
fraction ROG - flashing losses:		0.308
fraction ROG - evaporative losses:		0.885

Paint Factor Matrix	paint condition	
paint color	good	poor
spec alum	0.39	0.49
diff alum	0.60	0.68
lite grey	0.54	0.63
med grey	0.68	0.74
red	0.89	0.91
white	0.17	0.34

Molecular Weight Matrix	
liquid	mol wt
gas rvp 13	62
gas rvp 10	66
gas rvp 7	68
crude oil	50
JP -4	80
jet kerosene	130
fuel oil 2	130
fuel oil 6	190

Adjusted TVP Matrix	
liquid	TVP value
gas rvp 13	7.908
gas rvp 10	5.56
gas rvp 7	3.932
crude oil	2.98089
JP -4	1.516
jet kerosene	0.0103
fuel oil 2	0.009488
fuel oil 6	0.0000472

RVP Matrix	
liquid	RVP value
gas rvp 13	13
gas rvp 10	10
gas rvp 7	7
crude oil	4.603769939
JP -4	2.7
jet kerosene	0.029
fuel oil 2	0.022
fuel oil 6	0.00019

Long-Term VRU_Eff = 95.00%

Short-Term VRU_Eff = 95.00%

Emissions	Uncontrolled ROC emissions			Controlled ROC emissions		
	lb/hr	lb/day	ton/year	lb/hr	lb/day	ton/year
breathing loss [17] =	0.49	11.84	2.16	0.02	0.59	0.11
working loss [18] =	0.00	0.00	0.00	0.00	0.00	0.00
flashing loss [19] =	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS =	**0.49**	**11.84**	**2.16**	**0.02**	**0.59**	**0.11**

South Ellwood Crude Tank # 1 T-204: PROPOSED PROJECT

FIXED ROOF TANK CALCULATION (AP-42: Chapter 7 Method)

from PTO 7904R10

Basic Input Data	
liquid {1:G13, 2:G10, 3:G7, 4:C, 5:JP, 6:ker, 7:O2, 8:O6} =	4
liquid TVP =	2.8
if TVP is entered, enter TVP temperature (°F) =	64
tank heated {yes, no} =	no
if tank is heated, enter temp (°F) =	
vapor recovery system present? {yes, no} =	yes
is this a wash tank? {yes, no} =	no
will flashing losses occur in this tank? {yes, no} =	no
breather vent pressure setting range (psi) (def = 0.06):	0.06

Permit:	PTO 7904R.10
Date:	02/16/16
Tank:	Crude Tank #204
Name:	EOF
Filename:	
District:	Santa Barbara
Version:	Tank-2b.xls

Tank Data		
diameter (feet) =		26.75
capacity (enter barrels in first col, gals will compute) =	2,000	84,000
conical or dome roof? {c, d} =		d
shell height (feet) =		30
roof height (def = 1):		1
ave liq height (feet):		15
color {1:Spec Al, 2:Diff Al, 3:Lite, 4:Med, 5:Rd, 6:Wh} =		4
condition {1: Good, 2: Poor} =		1
upstream pressure (psig) (def = 0 when no flashing occurs):		0

Liquid Data	A	B
maximum daily throughput (bopd) =		1,000
Ann thruput (gal): (enter value in Column A if not max PTE)		1.533E+07
RVP (psia):		4.60377
°API gravity =		7.1

Computed Values		
roof outage [1] (feet):		0.5
vapor space volume [2] (cubic feet):		8,711
turnovers [3] :		182.5
turnover factor [4] :		0.33
paint factor [5] :		0.68
surface temperatures (°R, °F)		
average [6] :	527.2	67.2
maximum [7] :	539	79
minimum [8] :	515.4	55.4
product factor [9] :		0.75
diurnal vapor ranges		
temperature [10] (fahrenheit degrees):		47.2
vapor pressure [11] (psia):		1.36788
molecular weight [12] (lb/lb-mol):		50
TVP [13] (psia) [adjusted for ave liquid surface temp]:		2.98089
vapor density [14] (lb/cubic foot):		0.026345
vapor expansion factor [15] :		0.201
vapor saturation factor [16] :		0.289956
vented vapor volume (scf/bbl):		8
fraction ROG - flashing losses:		0.308
fraction ROG - evaporative losses:		0.885

Paint Factor Matrix	paint condition	
paint color	good	poor
spec alum	0.39	0.49
diff alum	0.60	0.68
lite grey	0.54	0.63
med grey	0.68	0.74
red	0.89	0.91
white	0.17	0.34

Molecular Weight Matrix	
liquid	mol wt
gas rvp 13	62
gas rvp 10	66
gas rvp 7	68
crude oil	50
JP -4	80
jet kerosene	130
fuel oil 2	130
fuel oil 6	190

Adjusted TVP Matrix	
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gas rvp 13	7.908
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fuel oil 2	0.009488
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RVP Matrix	
liquid	RVP value
gas rvp 13	13
gas rvp 10	10
gas rvp 7	7
crude oil	4.603769939
JP -4	2.7
jet kerosene	0.029
fuel oil 2	0.022
fuel oil 6	0.00019

Long-Term VRU_Eff = 95.00%

Short-Term VRU_Eff = 95.00%

Emissions	Uncontrolled ROC emissions			Controlled ROC emissions		
	lb/hr	lb/day	ton/year	lb/hr	lb/day	ton/year
breathing loss [17] =	0.49	11.84	2.16	0.02	0.59	0.11
working loss [18] =	1.36	32.65	5.96	0.07	1.63	0.30
flashing loss [19] =	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS =	**1.85**	**44.48**	**8.12**	**0.09**	**2.22**	**0.41**

Operations Emissions Summary Mitigated

	Peak Day Emissions						Annual Emissions					
	NOx	ROC	CO	SO_2	PM_{10}	$PM_{2.5}$	NOx	ROC	CO	SO_2	PM_{10}	$PM_{2.5}$
Baseline Operations												
EOF	44	510	105	22	9	9	5.0	84	18	3.6	1.4	1.4
Platform Holly, Operations	19	483	677	24	25	25	1.0	53	2.2	0.1	0.2	0.2
Platform Holly, Drilling	66	14	50	2	10	10	2.3	0.8	2.9	0.1	0.5	0.5
Crew, Supply Boats and Helicopters	631	24	95	63	42	39	32	1.7	5.1	3.2	1.8	1.8
Mobile Emissions	12.3	0.7	7.9	0.0	0.2	0.2	1.3	0.1	0.9	0.0	0.0	0.0
Total Current Operations	***772***	***1032***	***935***	***111***	***86***	***83***	***42***	***139***	***29***	***7.1***	***4.0***	***4.0***
Proposed Operations												
EOF	63	372	233	40	14	14	8	59	40	7	2	2
Platform Holly, Operations	19	483	677	24	25	25	1	53	2	0.1	0.2	0.2
Platform Holly, Drilling	76	19	68	3	13	13	6	2	8	0	1	1
Crew and Supply Boats	631	24	95	63	39	37	50	2	8	5	2	2
Mobile Emissions	15	1	8	0	0	0	2	0	1	0	0	0
Total Proposed Operations	***804***	***899***	***1081***	***130***	***91***	***89***	***67***	***116***	***59***	***12***	***6***	***6***
Total Baseline Operations	772	1032	935	111	86	83						
Total Increase	**32**	**-133**	**147**	**19**	**5**	**5**	**25**	**-23**	**30**	**5**	**2**	**2**
Threshold	55	55	-	55	80	80	-	-	-	-	-	-
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	-	-	-	-	-	-

Mobile Emissions Summary

	Peak Day Emissions						Annual Emissions					
Source	NOx	ROC	CO	SO_2	PM_{10}	$PM_{2.5}$	NOx	ROC	CO	SO_2	PM_{10}	$PM_{2.5}$
Baseline Emissions	5.2	0.3	3.2	0.0	0.1	0.1	0.9	0.0	0.6	0.0	0.0	0.0
Baseline Emissions Drilling Only	7.1	0.4	4.6	0.0	0.1	0.1	0.5	0.0	0.3	0.0	0.0	0.0
Proposed Project Emissions	7.7	0.4	3.6	0.0	0.2	0.1	1.3	0.1	0.6	0.0	0.0	0.0
Proposed Project Emissions Drilling only	7.1	0.4	4.6	0.0	0.1	0.1	0.9	0.1	0.6	0.0	0.0	0.0

Construction Emissions Summary

	Peak Day Emissions						Total Emissions					
	NOx	ROC	CO	SO_2	PM_{10}	$PM_{2.5}$	NOx	ROC	CO	SO_2	PM_{10}	$PM_{2.5}$
Supply Boats and Barge	284.86	8.53	39.76	28.61	16.09	15.94	2.35	0.07	0.33	0.24	0.13	0.13
Holly Equipment	114.36	9.45	33.24	9.60	7.21	7.15	3.43	0.28	1.00	0.29	0.22	0.21
Offsite Vehicles	13.91	0.70	3.57	0.02	0.25	0.24	0.02	0.00	0.02	0.00	0.00	0.00
Total	**399.22**	**17.98**	**73.00**	**38.20**	**23.30**	**23.09**	**5.78**	**0.35**	**1.32**	**0.52**	**0.35**	**0.35**
Threshold							25	25	-	25	25	25
Exceeds Threshold?							No	No	-	No	No	No

South Ellwood Air Emissions: Proposed Project - MITIGATED
EOF Facilities

									Operating Schedule						
Equipment Category	**Code**	**Description**	**Fuel or Service**	**Parameter**	**Size**	**Units**	**Capacity**	**Units**	**Actual Annual Use**	**Units**	**Peak Day Use**	**Units**	**Peak Day Hours**	**Yearly Days**	**Load**
				S, ppmv											
Combustion-External	EOF-H201	Heater Treater H-201	Fuel Gas	80	4.399	MMBtu/hr	4.399	MMBtu/hr	3	mmbtu	3.0	mmbtu/day	0.68	0.03	0.00
	EOF-H202	Heater Treater H-202	Fuel Gas	80	2.464	MMBtu/hr	2.464	MMBtu/hr	0	mmbtu	0.0	mmbtu/day	0.00	0.00	0.00
	EOF-H203	Heater Treater H-203	Fuel Gas	80	4.399	MMBtu/hr	4.399	MMBtu/hr	20	mmbtu	20.0	mmbtu/day	4.55	0.19	0.00
	EOF-H204	Process Heater H-204	FG/Permeate	239	25.000	MMBtu/hr	25.000	MMBtu/hr	172,530	mmbtu	486.0	mmbtu/day	24.00	355	0.79
Combustion: Flares	EOF-H205pi	Thermal Oxidizer H-205, Pilot	Fuel Gas	205	-	MMBtu/hr	-	MMBtu/hr	0	mmbtu	0	mmbtu/day	0.00	0.00	1.00
	EOF-H205p	Thermal Oxidizer H-205, Planned	FG/Permeate	205	35.00	MMBtu/hr	35.000	MMBtu/hr	201,680	mmbtu	589.7	mmbtu/day	24.00	342	0.66
	EOF-H205u	Thermal Oxidizer H-205, Unplanned	FG/Permeate	15,000	140.00	MMBtu/hr	140.000	MMBtu/hr	53	mmbtu	53.0	mmbtu/day	0.38	0.02	0.00
	EOF-H206pi	Thermal Oxidizer H-206, Pilot	Fuel Gas	205	0.34	MMBtu/hr	0.34	MMBtu/hr	2,988	mmbtu	8.2	mmbtu/day	24.00	365	1.00
	EOF-H206p	Thermal Oxidizer H-206, Planned	Permeate	205	30.00	MMBtu/hr	30.00	MMBtu/hr	3,266	mmbtu	9.5	mmbtu/day	24.00	342	0.01
	EOF-H206u	Thermal Oxidizer H-206, Unplanned	Permeate	15,000	220.00	MMBtu/hr	220.00	MMBtu/hr	48	mmbtu	48.0	mmbtu/day	0.22	0.01	0.00
	EOF-H207pi	Thermal Oxidizer H-207, Pilot	Fuel Gas	205	1.00	MMBtu/hr	1.00	MMBtu/hr	8,771	mmbtu	24.0	mmbtu/day	24.00	365	1.00
	EOF-H207p	Thermal Oxidizer H-207, Planned	Permeate	205	30.00	MMBtu/hr	30.00	MMBtu/hr	8,771	mmbtu	25.6	mmbtu/day	24.00	342	0.03
	EOF-H207u	Thermal Oxidizer H-207, Unplanned	Permeate	15,000	30.00	MMBtu/hr	30.00	MMBtu/hr	83	mmbtu	83.0	mmbtu/day	2.77	0.12	0.00
				RVP											
Oil Storage Tanks	EOF-T202	Oil Tank T-202	Oil	4.8	35'd x 16'h	feet	13,000	bbl/day	1.99E+08	gal/yr	-	-	24.0		1.00
	EOF-T203	Oil Tank T-203	Oil	4.8	35'd x 16'h	feet	13,000	bbl/day	1.99E+08	gal/yr	-	-	24.0		1.00
	EOF-T204	Oil Tank T-204	Oil	4.8	30'd x 24'h	feet	1,000	bbl/day	1.53E+07	gal/yr	-	-	24.0		1.00
	EOF-T101	EB Tank T-101	HC	1.5	12'd x 20'h	feet	-	bbl/day	0.00E+00	gal/yr	-	-	24.0		1.00
				psig											
Pigging Equipment	EOF-PROE	Receiver: oil emulsion	oil	1	0.33'd x 4.5'l	feet	1.13	acf-event	79	events/yr	1.00	events/dy	1.0	79.0	-
	EOF-PRU	Receiver: utility	gas or oil	1	0.33'd x 4.5'l	feet	1.13	acf-event	2	events/yr	1.00	events/dy	1.0	2.0	-
	EOF-PRPG	Receiver: produced gas	gas	1	0.33'd x 4.5'l	feet	1.13	acf-event	49	events/yr	1.00	events/dy	1.0	49.0	-
	EOF-PLSG	Launcher: seep gas	gas	1	0.33'd x 4.5'l	feet	1.13	acf-event	0	events/yr	1.00	events/dy	1.0	0.0	-
	EOF-PLSG	Reciever: EOF to AAPL (at SYU)	oil	1	0.83'd x 12'l	feet	9.24	acf-event	12	events/yr	1.00	events/dy	1.0	12.0	-
	EOF-PLSG	Launcher: EOF to AAPL	oil	1	0.67'd x 12'l	feet	5.21	acf-event	12	events/yr	1.00	events/dy	1.0	12.0	-
Sump/Wastewater Tanks	EOF-S202	Sump Tank S-202	W/W	sec/VRS	6.5'dia	feet	33.18	sq. ft.	33.2	sq. ft.	-	-	24.0	365	-
	EOF-TK201	Wash Tank TK-201	W/W	sec/VRS	30.0' dia	feet	706.86	sq. ft.	706.9	sq. ft.	-	-	24.0	365	-
	EOF-S203	Oil Sump S-203	oil		7' dia	feet	38.48	sq. ft.	38.5	sq. ft.	-	-	24.0	365	-
Loading Racks	EOF-RACK	Rack - LPG	LPG/NGL	balanced	712	loading/yr	10	kgal/hr	6,264	kgal/yr	8800	gal/day	1.72	365	-
	EOF-RACK	Rack - NGL	LPG/NGL	balanced	1	loading/yr	10	kgal/hr	8.4	kgal/yr	8442	gal/day	0.84	1	-
	EOF-RACK	Rack - Emulsion Breaker	HC Liq.	submerged	0	loading/yr	7	kgal/hr	0	kgal/yr	0	gal/day	0	0	-
Fugitive Cmpnnts, Gas/LL	EOF-FUGG-VALVES	Valves: Accessible	Gas/Lt. Liq.	-	3,519	comp-lp	3,519	comp-lp			-	-	24.0	365	-
	EOF-FUGG-VALVESi	Valves: Inaccessible	Gas/Lt. Liq.	-	4	comp-lp	4	comp-lp			-	-	24.0	365	-
	EOF-FUGG-VALVESU	Valves: Unsafe	Gas/Lt. Liq.	-	6	comp-lp	6	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CONN	Connectors: Accessible	Gas/Lt. Liq.	-	19,406	comp-lp	19,406	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CONNi	Connectors: Inaccessible	Gas/Lt. Liq.	-	2,327	comp-lp	2,327	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CONNu	Connectors: Unsafe	Gas/Lt. Liq.	-	78	comp-lp	78	comp-lp			-	-	24.0	365	-
	EOF-FUGG-CS	Compressor Seal	Gas/Lt. Liq.	-	20	comp-lp	20	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PRV	Press. Relief Valves: Accessible	Gas/Lt. Liq.	-	7	comp-lp	7	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PRVi	Press. Relief Valves: Inaccessible	Gas/Lt. Liq.	-	0	comp-lp	0	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PRVu	Press. Relief Valves: Unsafe	Gas/Lt. Liq.	-	0	comp-lp	0	comp-lp			-	-	24.0	365	-
	EOF-FUGG-PS	Pump Seal	Gas/Lt. Liq.	-	10	comp-lp	10	comp-lp			-	-	24.0	365	-
				sub-total =	**25,377**		**25,377**								
Fugitive Cmpnnts, Oil	EOF-FUGO-VALVES	Valves: Accessible	Oil	-	647	comp-lp	647	comp-lp			-	-	24.0	365	-
	EOF-FUGO-VALVES	Valves: Accessible Cat E	Oil	-	73	comp-lp	73	comp-lp			-	-	24.0	365	-
	EOF-FUGO-CONN	Connectors: Accessible	Oil	-	3,120	comp-lp	3,120	comp-lp			-	-	24.0	365	-
	EOF-FUGO-CONN	Connectors: Accessible Cat E	Oil	-	314	comp-lp	314	comp-lp			-	-	24.0	365	-
	EOF-FUGO-CONNu	Connectors: Unsafe	Oil	-	0	comp-lp	0	comp-lp			-	-	24.0	365	-
	EOF-FUGO-PRV	Press. Relief Valves: Accessible	Oil	-	0	comp-lp	0	comp-lp			-	-	24.0	365	-
	EOF-FUGO-PS	Pump Seal	Oil	-	7	comp-lp	7	comp-lp			-	-	24.0	365	-
				sub-total =	**4,161**		**4,161**								
Solvent/Coatings	EOF-SOL	Cleanin/Degreasing	-	-	20.00	gal/yr	3.70	gal/day avg	790	g/l	3.70	gal/day	1	365	-
	EOF-SCOAT	Surface Coating	-	-	28.0	gal/yr	11.20	gal/day avg	250	g/l	11.20	gal/day	1	365	-
Other Equipment	EOF-EFP	Emergency Fire Pump	CARB Diesel		292	bhp	26	Hours/yr	28.9	mmbtu/yr	0.56	mmbtu/day	0.5	26.00	0.54
	EOF-EG	Emergency Generator	CARB Diesel		509	bhp	12	Hours/yr	32.9	mmbtu/yr	2.74	mmbtu/day	1.0	12.00	0.77
TOTAL EOF Emissions															

South Ellwood Air Emissions: Proposed Project - MITIGATED
Platform Holly Facilities - MITIGATED

									Operating Schedule						
Equipment Category	Code	Description	Fuel or Service	Parameter	Size	Units	Capacity	Units	Actual Total Use	Units	Peak Day Use	Units	Peak Day Hours	Yearly Days	Load
Combustion: Flare	HOLLY-FLAREpi	Flare Planned - Pilot	Fuel Gas	-	200	scfh	0.220	MMBtu/hr	964	mmbtu	2.6	mmbtu/day	24.00	365.00	0.50
	HOLLY-FLAREp	Flare Planned - Purge	Fuel Gas	-	2100	scfh	2.310	MMBtu/hr	3,236	mmbtu	8.9	mmbtu/day	24.00	365.00	0.16
	HOLLY-FLAREpu	Flare Planned - LP Purge	Fuel Gas	-	300	scfh	0.330	MMBtu/hr	209	mmbtu	0.6	mmbtu/day	24.00	365.00	0.07
	HOLLY-FLAREi	Flare Planned - Intermittent	Holly Gas	-	0	scfh	0.000	MMBtu/hr	0	mmbtu	0.0	mmbtu/day	0.00	0.00	0.00
	HOLLY-FLAREu	Flare Unplanned	Holly Gas	-	480000	scf/yr	528.000	MMBtu/hr	8.6	mmbtu	8.6	mmbtu/day	0.02	0.00	0.00
Fugitive Cmpnnts	HOLLY-FUGO	Oil, controlled	Oil	-	3992	comp-lp	-	-			-	-	24.0	365	-
	HOLLY-FUGOu	Oil, unsafe	Oil	-	14	comp-lp	-	-			-	-	24.0	365	-
	HOLLY-FUGG	Gas, controlled	Gas	-	14067	comp-lp	-	-			-	-	24.0	365	-
	HOLLY-FUGGu	Gas, unsafe	Gas	-	964	comp-lp	-	-			-	-	24.0	365	-
Pigging Equip.	HOLLY-PIGO	Oil Launcher	Gas	-	5.00	psi	1.40	ft3	79	events/yr	1.00	events/dy	1.0	79.0	-
	HOLLY-PIGU	Utility Gas Launcher	Gas	-	5.00	psi	1.40	ft3	2	events/yr	1.00	events/dy	1.0	2.0	-
	HOLLY-PIGG	Gas Launcher	Gas	-	5.00	psi	1.40	ft3	49	events/yr	1.00	events/dy	1.0	49.0	-
Sumps/Tanks/Separators	HOLLY-T1	Oil surge tank (T-1)	-	-	44.2	ft2	-	-			-	-	24.0	365	-
	HOLLY-T4	Overflow sump tank (T-4)	-	-	113.2	ft2	-	-			-	-	24.0	365	-
Solvent/Coatings	HOLLY-SOL	Cleanin/Degreasing	-	-	177.6	gal/yr	32.89	gal/day avg	250	g/l	32.89	gal/day	1	365	-
	HOLLY-SCOAT	Surface Coating	-	-	229	gal/yr	91.60	gal/day avg	250	g/l	91.60	gal/day	1	365	-
Boom Boat	HOLLY-BB	Boom Boat	Gas	-	225	bhp-total	0.1	gal/hp-hr	1.5	hrs/yr	1.5	hrs/day	1.5	1	0.65
ICEs	HOLLY-EG	Backup Emergency Generator	D2	-	373.00	bhp	21.2	gallons/hr	0.09	kgal/yr	0.030	kgal/day	0.25	3	0.00
	HOLLY-CRANE	Pedestal Crane	D2	-	250.00	bhp	14.1	gallons/hr	8.311	kgal/yr	0.083	kgal/day	5.9	298	0.34
	HOLLY-DGEN1	Generator 1, NSCR, well maintenance	NG	-	803	hp	7.59	mmbtu/hr	1,662	mmbtu	4.6	mmbtu/day	24	365	0.025
	HOLLY-DGEN2	Generator 2, NSCR, well maintenance	NG	-	803	hp	7.59	mmbtu/hr	1,662	mmbtu	4.6	mmbtu/day	24	365	0.025
	HOLLY-DGEN3	Generator 3, NSCR, well maintenance	NG	-	1053	hp	8.10	mmbtu/hr	1,774	mmbtu	4.9	mmbtu/day	24	365	0.025
Supply Boat	HOLLY-SBmain	Supply Boat Main Engines	D2	-	4920.00	bhp-total	270.10	gal/hr	124.1	kGal/yr	961	gal/day	3.6	365	0.65
	HOLLY-SBgen	Supply Boat Generator Engines	D2	-	530.00	bhp-total	29.10	gal/hr	0	kGal/yr	0	gal/day	0.0	365	0.50
	HOLLY-SBBT	Supply Boat Bow Thruster	D2	-	530.00	bhp-total	29.10	gal/hr	0	kGal/yr	0	gal/day	0.0	365	0.50
Crew Boat	HOLLY-CBM	Crew Boat Main Engines	D2	-	1605.00	bhp-total	81.70	gal/hr	53.9	kGal/yr	160.4	gal/day	2.0	365	0.85
	HOLLY-CBA	Crew Boat Auxillary Engines	D2	-	131.00	bhp-total	7.20	gal/hr	0	kGal/yr	0	gal/day	0.0	365	0.50
Helicopters	HOLLY-HELIO	Heliocopter	AG	-			20.79	gal/RT Flight	2	flights/yr					
Total Platform Holly															

Platform Holly Drilling Equipment

									Operating Schedule							
Equipment Category		Description	Fuel or Service	Size	Units	Capacity	Units	Actual Total Use	Units	Actual Total Gallons	Peak Day Use	Units	Peak Day Hours	Hrs/ well or Yearly Days	Ann. Avg Load
ICEs	HOLLY-DCRANE	Crane	D2	92	hp	4.7	gallons/hr	294	mmbtu/yr	2,158	-	-	8	786	0.29
	HOLLY-DELU	Electric Line Unit	D2	121	hp	0.0	electric	0	mmbtu/yr	0	-	-	0	48	0.42
	HOLLY-DSLU	Slick Line Unit	D2	90	hp	0.0	electric	0	mmbtu/yr	0	-	-	4	48	0.42
	HOLLY-DHU	Hydraulic Unit for Casing Tongs	D2	90	hp	0.0	electric	0	mmbtu/yr	0	-	-	4	472	0.42
	HOLLY-DCTU	Coil Tubing Unit	D2	210	hp	0.0	electric	0	mmbtu/yr	0	-	-	0	629	0.42
	HOLLY-DCU	Cement Unit	D2	335	hp	17.1	gallons/hr	189	mmbtu/yr	1,390	-	-	8	96	0.42
	HOLLY-DC	Compressor	D2	110	hp	0.0	electric	0	mmbtu/yr	0	-	-	2	1572	0.42
	HOLLY-DNU	Nitrogen Unit	D2	345	hp	0.0	electric	0	mmbtu/yr	0	-	-	0	48	0.42
	HOLLY-DWKP	Well Kill Pump ICE	D2	110	hp	5.6	gallons/hr	31	mmbtu/yr	228	-	-	0	48	0.42
	HOLLY-DDGEN1	Generator 1, NSCR, well drilling	NG	803	hp	7.59	mmbtu/hr	19,090	mmbtu/yr	-	72.9	mmbtu/day	24	262	0.29
	HOLLY-DDGEN2	Generator 2, NSCR, well drilling	NG	803	hp	7.59	mmbtu/hr	19,090	mmbtu/yr	-	72.9	mmbtu/day	24	262	0.29
	HOLLY-DDGEN3	Generator 3, NSCR, well drilling	NG	1053	hp	8.10	mmbtu/hr	20,373	mmbtu/yr	-	77.8	mmbtu/day	24	262	0.29
TOTAL Drilling															

South Ellwood Air Emissions: Proposed Project - MITIGATED

NOTES

1) Daily average crude oil production, 2014 CVR average, bopd (used permit limit)	13,000	
2) Daily average gas production, 2014 CVR average, mscfd (used permit limit)	13,000	
3) LPG/NGL production annual, gallons	14,833,770	
4) LPG/NGL fraction into crude, as per 2015 operations	0.0436	
4) LPG/NGL production mixed with crude into pipeline (based on 2014 fraction)	8,569,848	
5) Wells drilled, number	2	
6) Time per well drilled, days	131	
7) Days per year crude plant operating	360	
8) Days per year gas plant operating	342	
7) Estimated total annual fuel use, gas, mmbtu, EOF + Holly	407,729	mmbtu/yr
8) EOF Heaters and flare total (baseline annual total of 224,248 mmbtu)	398,213	mmbtu/yr
9) DPM PM2.5/PM10 ratio, from SCAQMD CEIDARS	0.991	Distillate non-electrical generation, PM2.5/PM10 fraction

10) Drilling generators assumed to operate at full load during drilling, as per Applicant submittals
11) Supply boat assumed to operate during drilling only
12) Loading rack ROC emission factor was correct to be 4.8 lb ROC/kgal transferred with a 95% vapor recovery efficiency (0.24), see APCD HRA Report for inventory year 2008 DRAFT
13) Loading rack loading rate was also corrected to 10 kgal/hr as per APCD HRA report for 2008 inventory year DRAFT
14) EOF Heater use linearly increased by crude throughput increase
15) Supply boat maximum daily fuel use of 961 gallons as per Applicant submittals for 4 trips per day from Casitas Pier
16) Crew boat peak day fuel use increased by 15% during drilling only

17) Increase in crude tanks fugitive emissions, fraction	2.7
18) Total new wells drilled (used to estimate long term emissions for HRA)	6
19) Average days per new well drilled (used to estimate long term emissions for HRA)	120
20) Platform Holly drilling generators peak day load average	0.40
21) Holly diesel fuel use, crane plus drilling, gallons	12,178

22) Platform Holly drilling generator load of 40% based on estimated load increase due to longer, deeper project wells

South Ellwood Air Emissions: Proposed Project - MITIGATED
EOF Facilities

			Emission Factors											Hourly Emissions, lbs/hr					
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**Sox**	**PM10**	**PM2.5**	**CO2**	**N2O**	**CH4**	**Units**	**EF Source**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Combustion-External	EOF-H201	Heater Treater H-201	0.098	0.005	0.082	0.012	0.0070	0.0070	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.29	0.02	0.25	0.04	0.02	0.02
	EOF-H202	Heater Treater H-202	0.098	0.005	0.082	0.012	0.0070	0.0070	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.00	0.00	0.00	0.00	0.00	0.00
	EOF-H203	Heater Treater H-203	0.098	0.005	0.082	0.012	0.0070	0.0070	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.43	0.02	0.36	0.05	0.03	0.03
	EOF-H204	Process Heater H-204	0.036	0.005	0.297	0.037	0.0070	0.0070	186.17	0.0002	0.03742	lb/MMBtu	PTO 7904.R10	0.90	0.13	7.43	0.93	0.18	0.18
Combustion: Flares	EOF-H205pi	Thermal Oxidizer H-205, Pilot	0.040	0.003	0.100	0.031	0.0140	0.0140	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.00	0.00	0.00	0.00	0.00	0.00
	EOF-H205p	Thermal Oxidizer H-205, Planned	0.040	0.003	0.100	0.031	0.0140	0.0140	164.12	0.0002	0.03041	lb/MMBtu	PTO 7904.R10	1.40	0.09	3.50	1.07	0.49	0.49
	EOF-H205u	Thermal Oxidizer H-205, Unplanned	0.040	0.003	0.100	1.470	0.0140	0.0140	164.12	0.0002	0.03041	lb/MMBtu	PTO 7904.R10	2.12	0.14	5.30	77.91	0.74	0.74
	EOF-H206pi	Thermal Oxidizer H-206, Pilot	0.070	0.003	0.370	0.031	0.0140	0.0140	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.02	0.00	0.13	0.01	0.00	0.00
	EOF-H206p	Thermal Oxidizer H-206, Planned	0.098	0.005	0.370	0.031	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	2.94	0.16	11.10	0.92	0.42	0.42
	EOF-H206u	Thermal Oxidizer H-206, Unplanned	0.098	0.005	0.370	1.470	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	4.70	0.26	17.76	70.56	0.67	0.67
	EOF-H207pi	Thermal Oxidizer H-207, Pilot	0.070	0.003	0.370	0.031	0.0140	0.0140	139.82	0.0002	0.02269	lb/MMBtu	PTO 7904.R10	0.07	0.00	0.37	0.03	0.01	0.01
	EOF-H207p	Thermal Oxidizer H-207, Planned	0.098	0.005	0.370	0.031	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	2.94	0.16	11.10	0.92	0.42	0.42
	EOF-H207u	Thermal Oxidizer H-207, Unplanned	0.098	0.005	0.370	1.470	0.0140	0.0140	189.39	0.0002	0.03844	lb/MMBtu	PTO 7904.R10	2.94	0.16	11.10	44.10	0.42	0.42
Oil Storage Tanks	EOF-T202	Oil Tank T-202	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/ROC	PTO 7904.R10	-	0.50	-	-	-	-
	EOF-T203	Oil Tank T-203	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/ROC	PTO 7904.R10	-	0.50	-	-	-	-
	EOF-T204	Oil Tank T-204	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/ROC	PTO 7904.R10	-	0.09	-	-	-	-
	EOF-T101	EB Tank T-101	-	-	-	-	-	-	0.00	0.00	0.00	From Tanks Calc, lb CH4/ROC	PTO 7904.R10	-	0.05	-	-	-	-
Pigging Equipment	EOF-PROE	Receiver: oil emulsion	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.09	-	-	-	-
	EOF-PRU	Receiver: utility	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.09	-	-	-	-
	EOF-PRPG	Receiver: produced gas	-	0.0192	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.02	-	-	-	-
	EOF-PLSG	Launcher: seep gas	-	0.0192	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.02	-	-	-	-
	EOF-PLSG	Reciever: EOF to AAPL (at SYU)	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.70	-	-	-	-
	EOF-PLSG	Launcher: EOF to AAPL	-	0.0759	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev., lb CH4/ROC	PTO 7904.R10	-	0.40	-	-	-	-
Sump/Wastewater Tanks	EOF-S202	Sump Tank S-202	-	0.001	-	-	-	-	0.00	0.00	0.00	lb/ft2-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-TK201	Wash Tank TK-201	-	0.001	-	-	-	-	0.00	0.00	0.00	lb/ft2-day, lb CH4/ROC	PTO 7904.R10	-	0.03	-	-	-	-
	EOF-S203	Oil Sump S-203	-	0.018	-	-	-	-	0.00	0.00	0.00	lb/ft2-day, lb CH4/ROC	PTO 7904.R10	-	0.03	-	-	-	-
Loading Racks	EOF-RACK	Rack - LPG	-	0.0433	-	-	-	-	0.00	0.00	0.00	lb/load, lb CH4/ROC	SBCAPCD Spreads	-	0.04	-	-	-	-
	EOF-RACK	Rack - NGL	-	0.0282	-	-	-	-	0.00	0.00	0.00	lb/load, lb CH4/ROC	SBCAPCD Spreads	-	0.03	-	-	-	-
	EOF-RACK	Rack - Emulsion Breaker	-	1.079	-	-	-	-	0.00	0.00	0.00	lb/1000 gallons, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
Fugitive Cmpnnts, Gas/LL	EOF-FUGG-VALVES	Valves: Accessible	-	0.048	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	7.04	-	-	-	-
	EOF-FUGG-VALVESi	Valves: Inaccessible	-	0.08	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.01	-	-	-	-
	EOF-FUGG-VALVESU	Valves: Unsafe	-	0.402	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.10	-	-	-	-
	EOF-FUGG-CONN	Connectors: Accessible	-	0.003	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	2.43	-	-	-	-
	EOF-FUGG-CONNi	Connectors: Inaccessible	-	0.005	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.48	-	-	-	-
	EOF-FUGG-CONNu	Connectors: Unsafe	-	0.025	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.08	-	-	-	-
	EOF-FUGG-CS	Compressor Seal	-	0.2592	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.22	-	-	-	-
	EOF-FUGG-PRV	Press. Relief Valves: Accessible	-	0.0834	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.02	-	-	-	-
	EOF-FUGG-PRVi	Press. Relief Valves: Inaccessible	-	0.139	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGG-PRVu	Press. Relief Valves: Unsafe	-	0.696	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGG-PS	Pump Seal	-	0.3126	-	-	-	-	0.69	0.00	1.02	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.13	-	-	-	-
Fugitive Cmpnnts, Oil	EOF-FUGO-VALVES	Valves: Accessible	-	0.028	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.75	-	-	-	-
	EOF-FUGO-VALVES	Valves: Accessible Cat E	-	0.017	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.05	-	-	-	-
	EOF-FUGO-CONN	Connectors: Accessible	-	0.005	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.65	-	-	-	-
	EOF-FUGO-CONN	Connectors: Accessible Cat E	-	0.003	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.04	-	-	-	-
	EOF-FUGO-CONNu	Connectors: Unsafe	-	0.023	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGO-PRV	Press. Relief Valves: Accessible	-	0.115	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.00	-	-	-	-
	EOF-FUGO-PS	Pump Seal	-	0.086	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	PTO 7904.R10	-	0.03	-	-	-	-
Solvent/Coatings	EOF-SOL	Cleanin/Degreasing	-	789.68	-	-	-	-	0.00	0.00	0.00	g/l	2014 CVR	-	24.41	-	-	-	-
	EOF-SCOAT	Surface Coating	-	250.00	-	-	-	-	0.00	0.00	0.00	g/l	2014 CVR	-	23.37	-	-	-	-
Other Equipment	EOF-EFP	Emergency Fire Pump	4.09	0.33	0.87	0.53	0.044	0.043	163.05	1E-05	0.0066	lb/MMBtu	CVR 2014- K	4.55	0.37	0.97	0.59	0.05	0.05
	EOF-EG	Emergency Generator	4.09	0.33	0.87	0.53	0.290	0.287	163.05	1E-05	0.0066	lb/MMBtu	CVR 2014- K	11.21	0.90	2.39	1.45	0.80	0.79
TOTAL EOF Emissions																			

South Ellwood Air Emissions: Proposed Project - MITIGATED
Platform Holly Facilities - MITIGATED

			Emission Factors											Hourly Emissions, lbs/hr					
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**Sox**	**PM10**	**PM2.5**	**CO2**	**N2O**	**CH4**	**Units**		**NOx**	**ROC**	**CO**	**SOx**	**PM10**	**PM2.5**
Combustion: Flare	HOLLY-FLAREpi	Flare Planned - Pilot	0.068	0.086	0.37	0.002	0.02	0.02	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.01	0.02	0.08	0.00	0.00	0.00
	HOLLY-FLAREp	Flare Planned - Purge	0.068	0.086	0.37	0.037	0.02	0.02	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.16	0.20	0.85	0.09	0.05	0.05
	HOLLY-FLAREpu	Flare Planned - LP Purge	0.068	0.086	0.37	0.037	0.02	0.02	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.02	0.03	0.12	0.01	0.01	0.01
	HOLLY-FLAREi	Flare Planned - Intermittent	0.068	0.086	0.37	0.037	0.02	0.02	162.70	0.0002	0.02476	lb/MMBtu	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-FLAREu	Flare Unplanned	0.068	0.086	0.37	2.612	0.02	0.02	162.70	0.0002	0.02476	lb/MMBtu	2014 CVR	0.59	0.74	3.20	22.57	0.17	0.17
Fugitive Cmpnnts	HOLLY-FUGO	Oil, controlled	-	0.0009	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	2014 CVR	-	0.15	-	-	-	-
	HOLLY-FUGOu	Oil, unsafe	-	0.0044	-	-	-	-	0.00	0.00	0.00	lbs/clp-day, lb CH4/ROC	2014 CVR	-	0.00	-	-	-	-
	HOLLY-FUGG	Gas, controlled	-	0.0147	-	-	-	-	1.06	0.00	1.35	lbs/clp-day, lb CH4/ROC	2014 CVR	-	8.62	-	-	-	-
	HOLLY-FUGGu	Gas, unsafe	-	0.0736	-	-	-	-	1.06	0.00	1.35	lbs/clp-day, lb CH4/ROC	2014 CVR	-	2.96	-	-	-	-
Pigging Equip.	HOLLY-PIGO	Oil Launcher	-	0.016	-	-	-	-	0.00	0.00	0.00	lb ROC/acf-ev.	2014 CVR	-	0.02	-	-	-	-
	HOLLY-PIGU	Utility Gas Launcher	-	0	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev.	2014 CVR	-	0.00	-	-	-	-
	HOLLY-PIGG	Gas Launcher	-	0	-	-	-	-	1.06	0.00	1.35	lb ROC/acf-ev.	2014 CVR	-	0.00	-	-	-	-
Sumps/Tanks/Separators	HOLLY-T1	Oil surge tank (T-1)	-	0.0058	-	-	-	-	0.00	0.00	0.00	lb/ft2-day	2014 CVR	-	0.01	-	-	-	-
	HOLLY-T4	Overflow sump tank (T-4)	-	0.0058	-	-	-	-	0.00	0.00	0.00	lb/ft2-day	2014 CVR	-	0.03	-	-	-	-
Solvent/Coatings	HOLLY-SOL	Cleanin/Degreasing	-	-	-	-	-	-	0.00	0.00	0.00	actual numbers from CVR	2014 CVR	-	0.37	-	-	-	-
	HOLLY-SCOAT	Surface Coating	-	250.00	-	-	-	-	0.00	0.00	0.00	g/l	2014 CVR	-	191.10	-	-	-	-
Boom Boat	HOLLY-BB	Boom Boat	7.2	4.9	1357.34	0.27	48.10	48.100	517.70	0.00	0.02	g/bhp-hr	2014 CVR, permit	2.32	1.58	437.68	0.09	15.51	15.51
ICEs	HOLLY-EG	Backup Emergency Generator	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	3.19	0.26	0.69	0.30	0.22	0.22
	HOLLY-CRANE	Pedestal Crane	0.11	0.01	0.1	0.0002	0.0004	0.0004	22	0.000	0.001	lb/gal	2014 CVR	1.55	0.14	1.41	0.00	0.01	0.01
	HOLLY-DGEN1	Generator 1, NSCR, well maintenance	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.03	0.01	0.06	0.00	0.01	0.01
	HOLLY-DGEN2	Generator 2, NSCR, well maintenance	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.03	0.01	0.06	0.00	0.01	0.01
	HOLLY-DGEN3	Generator 3, NSCR, well maintenance	0.143	0.143	0.215	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.03	0.03	0.04	0.00	0.01	0.01
Supply Boat	HOLLY-SBmain	Supply Boat Main Engines	561	16.800	78.3	56.34	31.68	31.395	22296	0.002	0.904	lb/1000 gallons	2014 CVR	151.53	4.54	21.15	15.22	8.56	8.48
	HOLLY-SBgen	Supply Boat Generator Engines	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-SBBT	Supply Boat Bow Thruster	600	48.980	129.26	56.34	42.18	41.800	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
Crew Boat	HOLLY-CBM	Crew Boat Main Engines	561	44.500	99.7	56.34	19.008	18.837	22296	0.002	0.904	lb/1000 gallons	2014 CVR	45.83	3.64	8.15	4.60	1.55	1.54
	HOLLY-CBA	Crew Boat Auxillary Engines	600	48.980	129.26	56.34	40.49	40.126	22296	0.002	0.904	lb/1000 gallons	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
Helicopters	HOLLY-HELIO	Heliocopter	1.58	0.68	3.82	0.15	5.98	4.19	396.71	0.00	0.02	lb/flight	2014 CVR, EPA	1.58	0.68	3.82	0.15	5.98	4.19
Total Platform Holly																			

Platform Holly Drilling Equipment

			Emission Factors											Peak Hourly Emissions, lbs/hr					
Equipment Category		**Description**	**NOx**	**ROC**	**CO**	**Sox**	**PM10**	**PM2.5**	**CO2**	**N2O**	**CH4**	**Units**		**NOx**	**ROC**	**CO**	**SOx**	**PM10**	**PM2.5**
ICEs	HOLLY-DCRANE	Crane	4.41	0.3	0.95	0.05	0.3	0.297	163.05	1E-05	0.0066	lb/MMBtu	2014 CVR	0.82	0.06	0.18	0.01	0.06	0.06
	HOLLY-DELU	Electric Line Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DSLU	Slick Line Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DHU	Hydraulic Unit for Casing Tongs	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DCTU	Coil Tubing Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DCU	Cement Unit	4.41	0.3	0.95	0.05	0.3	0.297	163.05	1E-05	0.0066	lb/MMBtu	2014 CVR	4.31	0.29	0.93	0.05	0.29	0.29
	HOLLY-DC	Compressor	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DNU	Nitrogen Unit	0	0	0	0	0	0.000	0	0	0	electric	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DWKP	Well Kill Pump ICE	4.41	0.3	0.95	0.05	0.3	0.297	163.05	1E-05	0.0066	lb/MMBtu	2014 CVR	0.00	0.00	0.00	0.00	0.00	0.00
	HOLLY-DDGEN1	Generator 1, NSCR, well drilling	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.50	0.11	0.89	0.04	0.14	0.14
	HOLLY-DDGEN2	Generator 2, NSCR, well drilling	0.166	0.037	0.292	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.50	0.11	0.89	0.04	0.14	0.14
	HOLLY-DDGEN3	Generator 3, NSCR, well drilling	0.143	0.143	0.215	0.013	0.046	0.046	139.82	0.0002	0.02269	lb/MMBtu	2014 CVR	0.46	0.46	0.70	0.04	0.15	0.15
TOTAL Drilling														**6.60**	**1.04**	**3.58**	**0.18**	**0.78**	**0.77**

South Ellwood Air Emissions: Proposed Project - MITIGATED
EOF Facilities

			Daily Emissions, lbs/day						Annual Emissions, tons/yr						MT/Year			
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**	**CO2**	**N2O**	**CH4**	**CO2e**
Combustion-External	EOF-H201	Heater Treater H-201	0.29	0.02	0.25	0.04	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.000	0.000	0
	EOF-H202	Heater Treater H-202	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0
	EOF-H203	Heater Treater H-203	1.96	0.10	1.64	0.24	0.14	0.14	0.00	0.00	0.00	0.00	0.00	0.00	1.26	0.000	0.000	1
	EOF-H204	Process Heater H-204	17.50	2.43	144.34	17.98	3.40	3.40	3.11	0.43	25.62	3.19	0.60	0.60	14454	0.017	2.905	14,532
Combustion: Flares	EOF-H205pi	Thermal Oxidizer H-205, Pilot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	EOF-H205p	Thermal Oxidizer H-205, Planned	23.59	1.59	58.97	18.10	8.26	8.26	4.03	0.27	10.08	3.10	1.41	1.41	14895	0.020	2.760	14,970
	EOF-H205u	Thermal Oxidizer H-205, Unplanned	2.12	0.14	5.30	77.91	0.74	0.74	0.00	0.00	0.00	0.04	0.00	0.00	4	0.000	0.001	4
	EOF-H206pi	Thermal Oxidizer H-206, Pilot	0.57	0.02	3.02	0.25	0.11	0.11	0.10	0.00	0.55	0.05	0.02	0.02	188	0.000	0.031	189
	EOF-H206p	Thermal Oxidizer H-206, Planned	0.94	0.05	3.53	0.29	0.13	0.13	0.16	0.01	0.60	0.05	0.02	0.02	278	0.000	0.056	280
	EOF-H206u	Thermal Oxidizer H-206, Unplanned	4.70	0.26	17.76	70.56	0.67	0.67	0.00	0.00	0.01	0.04	0.00	0.00	4	0.000	0.001	4
	EOF-H207pi	Thermal Oxidizer H-207, Pilot	1.68	0.07	8.88	0.74	0.34	0.34	0.31	0.01	1.62	0.13	0.06	0.06	552	0.001	0.090	554
	EOF-H207p	Thermal Oxidizer H-207, Planned	2.51	0.14	9.49	0.79	0.36	0.36	0.43	0.02	1.62	0.13	0.06	0.06	747	0.001	0.152	752
	EOF-H207u	Thermal Oxidizer H-207, Unplanned	8.13	0.45	30.71	122.01	1.16	1.16	0.00	0.00	0.02	0.06	0.00	0.00	7	0.000	0.001	7
Oil Storage Tanks	EOF-T202	Oil Tank T-202	-	11.97	-	-	-	-	-	2.18	-	-	-	-	0	0.000	0.000	0
	EOF-T203	Oil Tank T-203	-	11.97	-	-	-	-	-	2.18	-	-	-	-	0	0.000	0.000	0
	EOF-T204	Oil Tank T-204	-	2.22	-	-	-	-	-	0.41	-	-	-	-	0	0.000	0.000	0
	EOF-T101	EB Tank T-101	-	1.15	-	-	-	-	-	0.21	-	-	-	-	0	0.000	0.000	0
Pigging Equipment	EOF-PROE	Receiver: oil emulsion	-	0.09	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.004	0
	EOF-PRU	Receiver: utility	-	0.09	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-PRPG	Receiver: produced gas	-	0.02	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.001	0
	EOF-PLSG	Launcher: seep gas	-	0.02	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-PLSG	Reciever: EOF to AAPL (at SYU)	-	0.70	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.005	0
	EOF-PLSG	Launcher: EOF to AAPL	-	0.40	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.003	0
Sump/Wastewater Tanks	EOF-S202	Sump Tank S-202	-	0.03	-	-	-	-	-	0.01	-	-	-	-	0	0.000	0.000	0
	EOF-TK201	Wash Tank TK-201	-	0.71	-	-	-	-	-	0.13	-	-	-	-	0	0.000	0.000	0
	EOF-S203	Oil Sump S-203	-	0.69	-	-	-	-	-	0.13	-	-	-	-	0	0.000	0.000	0
Loading Racks	EOF-RACK	Rack - LPG	-	0.09	-	-	-	-	-	0.02	-	-	-	-	0	0.000	0.000	0
	EOF-RACK	Rack - NGL	-	0.03	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-RACK	Rack - Emulsion Breaker	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
Fugitive Cmpnnts, Gas/LL	EOF-FUGG-VALVES	Valves: Accessible	-	168.91	-	-	-	-	-	30.83	-	-	-	-	19	0.000	28.299	727
	EOF-FUGG-VALVESi	Valves: Inaccessible	-	0.32	-	-	-	-	-	0.06	-	-	-	-	0	0.000	0.054	1
	EOF-FUGG-VALVESU	Valves: Unsafe	-	2.41	-	-	-	-	-	0.44	-	-	-	-	0	0.000	0.404	10
	EOF-FUGG-CONN	Connectors: Accessible	-	58.22	-	-	-	-	-	10.62	-	-	-	-	7	0.000	9.754	250
	EOF-FUGG-CONNi	Connectors: Inaccessible	-	11.64	-	-	-	-	-	2.12	-	-	-	-	1	0.000	1.949	50
	EOF-FUGG-CONNu	Connectors: Unsafe	-	1.95	-	-	-	-	-	0.36	-	-	-	-	0	0.000	0.327	8
	EOF-FUGG-CS	Compressor Seal	-	5.18	-	-	-	-	-	0.95	-	-	-	-	1	0.000	0.869	22
	EOF-FUGG-PRV	Press. Relief Valves: Accessible	-	0.58	-	-	-	-	-	0.11	-	-	-	-	0	0.000	0.098	3
	EOF-FUGG-PRVi	Press. Relief Valves: Inaccessible	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGG-PRVu	Press. Relief Valves: Unsafe	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGG-PS	Pump Seal	-	3.13	-	-	-	-	-	0.57	-	-	-	-	0	0.000	0.524	13
Fugitive Cmpnnts, Oil	EOF-FUGO-VALVES	Valves: Accessible	-	18.12	-	-	-	-	-	3.31	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-VALVES	Valves: Accessible Cat E	-	1.24	-	-	-	-	-	0.23	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-CONN	Connectors: Accessible	-	15.60	-	-	-	-	-	2.85	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-CONN	Connectors: Accessible Cat E	-	0.94	-	-	-	-	-	0.17	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-CONNu	Connectors: Unsafe	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-PRV	Press. Relief Valves: Accessible	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	EOF-FUGO-PS	Pump Seal	-	0.60	-	-	-	-	-	0.11	-	-	-	-	0	0.000	0.000	0
Solvent/Coatings	EOF-SOL	Cleanin/Degreasing	-	24.41	-	-	-	-	-	0.07	-	-	-		0.00	0.000	0.000	0
	EOF-SCOAT	Surface Coating	-	23.37	-	-	-	-	-	0.03	-	-	-		0.00	0.000	0.000	0
Other Equipment	EOF-EFP	Emergency Fire Pump	2.27	0.18	0.48	0.29	0.02	0.02	0.06	0.00	0.01	0.01	0.00	0.00	2	0.000	0.000	2
	EOF-EG	Emergency Generator	11.21	0.90	2.39	1.45	0.80	0.79	0.07	0.01	0.01	0.01	0.00	0.00	2	0.000	0.000	2
TOTAL EOF Emissions			**62.53**	**372.30**	**232.99**	**40.18**	**13.58**	**13.57**	**8.28**	**58.85**	**40.2**	**6.80**	**2.19**	**2.19**	**31,165**	**0.04**	**48.29**	**32,384**

South Ellwood Air Emissions: Proposed Project - MITIGATED
Platform Holly Facilities - MITIGATED

			Daily Emissions, lbs/day						Annual Emissions, tons/yr						MT/Yr			
Equipment Category	**Code**	**Description**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**CO2**	**N2O**	**CH4**	**CO2e**
Combustion: Flare	HOLLY-FLAREpi	Flare Planned - Pilot	0.18	0.23	0.98	0.01	0.05	0.05	0.03	0.04	0.18	0.00	0.01	0.01	61	0.000	0.010	61
	HOLLY-FLAREp	Flare Planned - Purge	0.60	0.76	3.28	0.33	0.18	0.18	0.11	0.14	0.60	0.06	0.03	0.03	204	0.000	0.033	205
	HOLLY-FLAREpu	Flare Planned - LP Purge	0.04	0.05	0.21	0.02	0.01	0.01	0.01	0.01	0.04	0.00	0.00	0.00	13	0.000	0.002	13
	HOLLY-FLAREi	Flare Planned - Intermittent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-FLAREu	Flare Unplanned	0.59	0.74	3.20	22.57	0.17	0.17	0.00	0.00	0.00	0.01	0.00	0.00	1	0.000	0.000	1
Fugitive Cmpnnts	HOLLY-FUGO	Oil, controlled	-	3.59	-	-	-	-	-	0.66	-	-	-	-	0	0.000	0.000	0
	HOLLY-FUGOu	Oil, unsafe	-	0.06	-	-	-	-	-	0.01	-	-	-	-	0	0.000	0.000	0
	HOLLY-FUGG	Gas, controlled	-	206.78	-	-	-	-	-	37.74	-	-	-	-	36	0.000	45.852	1,182
	HOLLY-FUGGu	Gas, unsafe	-	70.95	-	-	-	-	-	12.95	-	-	-	-	12	0.000	15.732	406
Pigging Equip.	HOLLY-PIGO	Oil Launcher	-	0.02	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	HOLLY-PIGU	Utility Gas Launcher	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
	HOLLY-PIGG	Gas Launcher	-	0.00	-	-	-	-	-	0.00	-	-	-	-	0	0.000	0.000	0
													-	-				
Sumps/Tanks/Separators	HOLLY-T1	Oil surge tank (T-1)	-	0.26	-	-	-	-	-	0.05	-	-	-	-	0	0.000	0.000	0
	HOLLY-T4	Overflow sump tank (T-4)	-	0.66	-	-	-	-	-	0.12	-	-	-	-	0	0.000	0.000	0
Solvent/Coatings	HOLLY-SOL	Cleanin/Degreasing	-	3.04	-	-	-	-	-	0.34	-	-	-	-	0	0.000	0.000	0
	HOLLY-SCOAT	Surface Coating	-	191.10	-	-	-	-	-	0.24	-	-	-	-	0	0.000	0.000	0
Boom Boat	HOLLY-BB	Boom Boat	3.48	2.37	656.52	0.13	23.26	23.26	0.00	0.00	0.33	0.00	0.01	0.01	0	0.000	0.000	0
ICEs	HOLLY-EG	Backup Emergency Generator	3.19	0.26	0.69	0.30	0.22	0.22	0.03	0.00	0.01	0.00	0.00	0.00	1	0.000	0.000	1
	HOLLY-CRANE	Pedestal Crane	9.10	0.83	8.27	0.02	0.03	0.03	0.46	0.04	0.42	0.00	0.00	0.00	93	0.000	0.004	93
	HOLLY-DGEN1	Generator 1, NSCR, well maintenance	0.76	0.17	1.33	0.06	0.21	0.21	0.14	0.03	0.24	0.01	0.04	0.04	116	0.000	0.019	117
	HOLLY-DGEN2	Generator 2, NSCR, well maintenance	0.76	0.17	1.33	0.06	0.21	0.21	0.14	0.03	0.24	0.01	0.04	0.04	116	0.000	0.019	117
	HOLLY-DGEN3	Generator 3, NSCR, well maintenance	0.69	0.69	1.04	0.06	0.22	0.22	0.13	0.13	0.19	0.01	0.04	0.04	124	0.000	0.020	125
Supply Boat	HOLLY-SBmain	Supply Boat Main Engines	539.12	16.14	75.25	54.14	30.44	30.17	34.82	1.04	4.86	3.50	1.97	1.95	1,245	0.000	0.051	1,247
	HOLLY-SBgen	Supply Boat Generator Engines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-SBBT	Supply Boat Bow Thruster	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
Crew Boat	HOLLY-CBM	Crew Boat Main Engines	90.0	7.1	16.0	9.0	3.0	3.0	15.12	1.20	2.69	1.52	0.51	0.51	601	0.000	0.024	602
	HOLLY-CBA	Crew Boat Auxillary Engines	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
Helicopters	HOLLY-HELIO	Heliocopter	1.58	0.68	3.82	0.15	5.98	4.19	0.00	0.00	0.00	0.00	0.01	0.00	0	0.000	0.000	0
Total Platform Holly			**650.08**	**506.70**	**771.90**	**86.88**	**64.05**	**61.96**	**50.984**	**54.766**	**9.795**	**5.128**	**2.661**	**2.637**	**2,624**	**0.001**	**61.8**	**4,168**

Platform Holly Drilling Equipment

			Peak Daily Emissions, lbs/day						Annual Emissions, tons/yr						MT/Yr			
Equipment Category		**Description**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**NOx**	**ROC**	**CO**	**SOx**	**PM_{10}**	**PM2.5**	**CO2**	**N2O**	**CH4**	**CO2e**
ICEs	HOLLY-DCRANE	Crane	6.54	0.45	1.41	0.07	0.45	0.44	0.65	0.04	0.14	0.01	0.04	0.04	22	0.000	0.001	22
	HOLLY-DELU	Electric Line Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DSLU	Slick Line Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DHU	Hydraulic Unit for Casing Tongs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DCTU	Coil Tubing Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DCU	Cement Unit	34.51	2.35	7.43	0.39	2.35	2.33	0.42	0.03	0.09	0.00	0.03	0.03	14	0.000	0.001	14
	HOLLY-DC	Compressor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DNU	Nitrogen Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0.000	0.000	0
	HOLLY-DWKP	Well Kill Pump ICE	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.00	0.00	2	0.000	0.000	2
	HOLLY-DDGEN1	Generator 1, NSCR, well drilling	12.10	2.70	21.28	0.95	3.35	3.35	1.58	0.35	2.79	0.12	0.44	0.44	1,335	0.0021	0.2166	1,341
	HOLLY-DDGEN2	Generator 2, NSCR, well drilling	12.10	2.70	21.28	0.95	3.35	3.35	1.58	0.35	2.79	0.12	0.44	0.44	1,335	0.0021	0.2166	1,341
	HOLLY-DDGEN3	Generator 3, NSCR, well drilling	11.12	11.12	16.72	1.01	3.58	3.58	1.46	1.46	2.19	0.13	0.47	0.47	1,424	0.0022	0.2311	1,431
TOTAL Drilling			**76.37**	**19.30**	**68.1**	**3.37**	**13.07**	**13.05**	**5.76**	**2.24**	**8.01**	**0.39**	**1.42**	**1.42**	**4,131**	**0.006**	**0.666**	**4,150**

Venoco 5-year Operation May 2010 through April 2015

		Annual Days Available for Operation	Days Online Oil	Net Oil from Holly BBL	Stream Day Oil Produced BPD	Days Oil LACT Online	Oil LACT Net of LPG, NGL BBL	Stream Day Oil LACT BPD	Days Online Gas Processing	Gas Produced (Gas to Beach + SEEP) MSCF / Yr	Stream Day Gas Produced MSCFD	H2S in Gas to LoCat, ppm	Dry Sulfur TPY	Stream Day Dry Sulfur TPD	Stream Day Wet Sulfur Slurry Trucked Out TPD	wt% Sulfur in Slurry Trucked Out	Annual Truck Trips Wet Sulfur Slurry	LPG Produced BPY
May - Dec	2010	245	236	565,089	2,394	235	565,490	2,406	34	64,959	1,911	13,431	33	0.97	6.70	14%	11	3,623
Jan - Dec	2011	365	355	797,762	2,247	355	797,566	2,247	297	935,034	3,148	17,440	615	2.07	7.65	27%	113	44,589
Jan - Dec	2012	366	360	1,175,852	3,266	358	1,153,880	3,223	255	651,906	2,556	16,576	407	1.60	7.42	22%	92	41,344
Jan - Dec	2013	365	356	1,729,506	4,858	355	1,709,968	4,817	342	1,000,094	2,924	17,330	653	1.91	9.18	21%	144	54,972
Jan - Dec	2014	365	350	1,315,970	3,760	349	1,306,341	3,743	333	934,099	2,805	17,731	624	1.87	8.26	23%	130	56,633
Jan - April	2015	120	120	412,863	3,441	120	410,628	3,422	116	289,336	2,494	17,971	196	1.69	8.74	19%	49	17,363
	5 Yr Avg	365	355	1,199,408	3,375	354	1,188,775	3,354	275	775,085	2,814	17,269	505	1.83	8.21	22%	108	43,705
	20xx	365	355	4,620,200	13,000	355	4,620,200	13,000	275	3,580,200	13,000	20,000	2,699	9.80	43.90	22%	584	201,879
	20xx	365	360	4,680,000	13,000	360	4,680,000	13,000	342	4,446,000	13,000	20,000	3,352	9.80	43.90	22%	726	250,699

		NGL Produced BPY	Stream Day LPG Produced BPD	Stream Day NGL Produced BPD	LPG to LACT BBL	NGL to LACT BBL	Stream Day LPG to LACT BPD	Stream Day NGL to LACT BPD	2014, 2015 LPG % of Crude to LACT	2014, 2015 NGL % of Crude to LACT	2014, 2015 LPG & NGL % of Crude to LACT	2014, 2015 LPG & NGL to LACT	LPG Trucked BBL	NGL Trucked BBL	Total NGL/LPG Trucked BBL	LPG Trucks	NGL Trucks	LPG & NGL Truck Trips
May - Dec	2010	1,221	107	36	-	-							3,798	775	4,572	18	4	22
Jan - Dec	2011	14,457	150	49	-	-							44,365	14,426	58,791	208	77	285
Jan - Dec	2012	12,666	162	50	-	-							40,958	12,818	53,776	192	68	260
Jan - Dec	2013	32,664	161	96	-	1,052		3					54,997	30,997	85,995	258	160	418
Jan - Dec	2014	21,737	170	65	30,398	21,836	87	63	2.33%	1.67%	4.00%	52,234	26,471	201	26,672	125	1	126
Jan - April	2015	6,588	150	57	11,486	6,417	96	53	2.80%	1.56%	4.36%	17,903	5,897	-	5,897	28	-	28
	5 Yr Avg	17,867	159	65	32,667	20,677	94	59	2.50%	1.58%	4.36%	53,344	35,297	11,843	47,141	166	62	228
	20xx	82,528	733	300	100,260	82,528	325	206	2.57%	1.79%	4.36%	182,788	101,618	-	101,618	485	-	485
	20xx	102,486	733	300	101,558	102,486	335	232	2.17%	2.19%	4.36%	204,044	149,141	-	149,141	712	-	712

Stream Day is any day with production to EOF (>100 BBL, > 100 MSCF) or LACT production > 0 BBL
5-year timeline from May 1, 2010 through April 30, 2015
LPG to LACT and NGL to LACT based on values for 2014 and 2015 only. BPD using annual equivalent BBL for 2015 (BBL * 365 / 120)
20xx is future operation at max permitted rates, using online days from 5-year average.
NGL & LPG produced are ratio'd from gas average to gas maximum rates. LPG to LACT and NGL to LACT are calculated for % of Crude to LACT.
20xx truck trips are what's left after injecting LPG, NGL into the oil pipeline.
20xx in lavender assume daily production stream days equal to highest year in 5 year timeline.

LPG/NGL Truck Load = 8800 Gal
Sulfur Truck Load = 46,350 lbs

Normal operation will ship all NGL's, then LPG up to the limit in the oil pipeline.

Days Online for Oil or Gas Produced = Number of Days with Production > 100
Net Oil from Holly, Oil LACT, Gas Produced, LPG Produced, NGL Produced = Sum for Period
H2S in Gas to LoCat is Average of Non-zero Values During Period
Dry Sulfur = Stream Day Gas produced * 1000 * H2S in Gas / 379 * 32 /2240
wt% Sulfur in Slurry Trucked = Stream Day Dry Sulfur / Stream Day Sulfur Slurry Trucked Out
Annual Truck Trips Sulfur Slurry = Number of Trucks for Period, at 46,300 lb per Load
LPG plus NGL to LACT = 4.36% of crude oil volume as measured in 2015
20xx LPG + NGL to LACT = LACT Volume * 4.36%. All available NGL, then finish with LPG

Stream Day Oil Produced = Net Oil from Holly / Days Online Oil
Stream Day Oil LACT = Oil LACT / Days Oil LACT Online
Stream Day Gas Produced = Gas Produced / Days Online Gas
Stream Day Sulfur Trucked Out = Sum of Sulfur Slurry Trucked Out / Days Online Gas
Stream Day NGL/LPG Produced = NGL/LPG Produced / Days Online Gas
Stream Day NGL/LPG to LACT = NGL/LPG Produced / Days Oil LACT Online
Total NGL/LPG Trucked = Total NGL/LPG Produced - NGL/LPG to LACT

Venoco EOF H-204 and H-205 Heat Duty with Maximum Gas Rate and Typical Gas Composition

Typical Components	Gas to EOF		Removed Ahead of CO2 Skid	CO2 Skid Feed		Sales Gas		CO2 Skid Permeate to Burn	
Component	Percent	MSCFD	MSCFD	Percent	MSCFD	Percent	MSCFD	Percent	MSCFD
CO2	18.0%	2,340	865	14.3%	1,475	2.9%	230	54.0%	1,245
H2S	1.8%	234	234	0.0%	-	0.0%	-	0.0%	-
NGL	4.0%	520	520	0.0%	-	0.0%	-	0.0%	-
LPG	8.0%	1,040	1,040	0.0%	-	0.0%	-	0.0%	-
Remaining Gas	68.2%	8,866	-	85.7%	8,866	97.1%	7,805	46.0%	1,061
	100.0%	13,000	2,659	100.0%	10,341	100.0%	8,035	100.0%	2,306

Some CO2 is removed in the LoCat Unit and is routed with LoCat Air to H-205.

LoCat Air including CO2 removed in the LoCat unit does not count toward maximum H-205 limit.

The CO2 Skid removes remaining CO2 to meet the Sales Gas spec of 3%.

Per PTO, HHV of gas around CO2 skid at EOF is a linear function of CO2%, with slope = -1221.4 and intercept = 1126.1

	1st Stage	2nd Stage	Blend	
CO2 Skid Permeate CO2	35%	80%	54%	or 58% 1st Stage

H-204 Heat Input	Oil	Water	Emulsion	
Emulsion to Shore	13,000	7,000	20,000	BPD
	0.92	1.05	0.97	Specific Gravity
	174,556	107,273	281,829	lb/Hour
Emulsion 95 to 155 Deg	60	60	60	Deg F Rise
Specific Heat	0.50	1.00	0.69	Specific Heat
Required Heat for Emulsion	5.24	6.44	11.67	MMBTU/Hr
Required heat for Glycol Skid			2.50	MMBTU/Hr
70% Efficiency Burner			20.25	MMBTU/Hr

Permeate	Flowrate		HHV		Heat Input	
	2,306	MSCFD	467	BTU/SCF	44.82	MMBTU/Hr

H-204	Days/Yr	MMBTU/Yr		MMBTU/Hr
5-Year Average Gas Days	275	133,632		20.25
5-Year Max Gas Days	342	166,189		20.25
H-204 Permit Limit	365	219,000		25.00
H-205	Days/Yr	MMBTU/Yr	MMBTU/Mo	MMBTU/Hr
5-Year Average Gas Days	275	162,170	13,514	24.57
5-Year Max Gas Days	342	201,680	16,807	24.57
H-205 Permit Limit	365	201,985	16,832	35.00

CO2 Skid Flow and Heat Balance Check				
	MSCFD	CO2%	BTU/SCF	MMBTU/Hr
CO2 Skid Feed	10,341	14.3%	952	410.14
Sales Gas	8,035	2.9%	1091	365.32
Permeate	2,306	54.0%	467	44.82
In - Out	0.00			0.00