Significant Emission Unit Inventory - Base Scenario
(Expected Actual and Potential Annual)
Hilcorp Alaska, LLC - Endicott Production Facility

		Emissions (tons/year)					
EU ID	**Emission Unit Name**	**NO_X**	**CO**	**PM_{10}**	**VOC**	**SO_2**	**HAP**
			Significant Units				
			Turbines				
1	Nuovo-Pignone Frame 5D	918.2	197.7	10.8	3.4	129.9	1.63
2	Nuovo-Pignone Frame 5D	918.2	197.7	10.8	3.4	129.9	1.63
3	Nuovo-Pignone Frame 1	114.9	29.7	1.6	0.5	19.5	0.25
4	Ruston Tornado	181.2	37.3	2.0	0.6	24.5	0.31
5	Ruston Tornado	181.2	37.3	2.0	0.6	24.5	0.31
6	Ruston Tornado	187.3	38.3	2.1	0.7	25.2	0.32
7	Ruston Tornado	187.3	38.3	2.1	0.7	25.2	0.32
8	Ruston Tornado	187.3	38.3	2.1	0.7	25.2	0.32
9	Ruston Tornado	187.3	38.3	2.1	0.7	25.2	0.32
10	Nuovo-Pignone PGT-5	0	0	0	0	0	0
			Heaters				
11	Claudius Peters	18.2	29.3	1.9	1.4	18.1	0.48
12	ENTECH	14.2	6.2	1.5	1.1	14.1	0.37
14	BS&B	4.9	1.1	0.3	0.2	2.4	0.06
15	CE NATCO	17.7	4.1	1.0	0.7	9.4	0.25
			Engines				
17	Fairbanks Morse	34.0	5.8	0.4	0.7	0.8	0.00E+00
18	Fairbanks Morse	34.0	5.8	0.4	0.7	0.8	0.00E+00
24	Cummins Diesel 378F2	0.8	0.2	0.1	0.1	0.0	7.43E-04
76	Various	9.9	83.4	9.9	30.3	0.1	0.25
77	Caterpillar 3408	9.2	2.0	0.7	0.7	3.19E-03	0.00E+00
78	Caterpillar C27	3.3	0.4	0.1	0.1	2.8E-03	2.9E-03
			Flares				
25	GKN Birwelco LTD	16.6	90.3	5.3	34.2	19.3	0.80
26	GKN Birwelco LTD						
27	Halliburton	6.4	34.8	2.0	13.2	7.4	0.31
			Gasoline Dispensing Facility				
75	Gasoline Dispensing Facility	0	0	0	14.4	0	0.82
	Significant Unit Total	3,232.1	916.1	59.3	109.1	501.2	8.7
			Insignificant Units				
N/A	6 Tioga Heaters	2.3	0.6	0.23	0.04	0.02	0.00
37	Scale Inhibitor	0	0	0	0.04	0	0.00
38	Emulsion Breaker	0	0	0	0.00	0	0.00
39	Anti-Foam	0	0	0	0.00	0	0.00
40	Corrosion Inhibitor	0	0	0	0.04	0	0.00
41	Biocide	0	0	0	0.24	0	0.23
42	Biocide	0	0	0	0.24	0	0.23
43	MEG (60%)	0	0	0	0.00	0	0.00
44	Methanol	0	0	0	0.04	0	0.00
45	Arctic No. 1 Diesel	0	0	0	0.00	0	0.00
46	Methanol	0	0	0	0.04	0	0.00
47	Scale Inhibitor	0	0	0	0.04	0	0.00
48	TEG	0	0	0	0.00	0	0.00
	Insignificant Unit Total	2.30	0.58	0.23	0.73	0.02	0.47
	Total (Significant and Insignificant)	3,234.4	916.7	59.5	109.8	501.2	9.2
	Major/Minor	Major	Major	Minor	Major	NA	NA
	Total Assessable Emissions	**4,822**					

Significant Emission Unit Inventory - Potential Scenario
Hilcorp Alaska, LLC - Endicott Production Facility

		Emissions (tons/year)					
EU ID	**Emission Unit Name**	**NO_X**	**CO**	**PM_{10}**	**VOC**	**SO_2**	**HAP**
	Significant Units						
	Turbines						
1	Nuovo-Pignone Frame 5D	918.2	197.7	10.8	3.4	129.9	1.63
2	Nuovo-Pignone Frame 5D	918.2	197.7	10.8	3.4	129.9	1.63
3	Nuovo-Pignone Frame 1	114.9	29.7	1.6	0.5	19.5	0.25
4	Ruston Tornado	181.2	37.3	2.0	0.6	24.5	0.31
5	Ruston Tornado	181.2	37.3	2.0	0.6	24.5	0.31
6	Ruston Tornado	187.3	38.3	2.1	0.7	25.2	0.32
7	Ruston Tornado	187.3	38.3	2.1	0.7	25.2	0.32
8	Ruston Tornado	187.3	38.3	2.1	0.7	25.2	0.32
9	Ruston Tornado	187.3	38.3	2.1	0.7	25.2	0.32
10	Nuovo-Pignone PGT-5	0.0	0.0	0.0	0.0	0.0	0.00
	Heaters						
11	Claudius Peters	18.2	55.1	3.6	2.6	34.0	0.90
12	ENTECH	14.2	6.2	1.5	1.1	14.1	0.37
14	BS&B	4.9	1.1	0.3	0.2	2.4	0.00
15	CE NATCO	17.7	4.1	1.0	0.7	9.4	0.25
	Engines						
17	Fairbanks Morse	590.4	100.4	7.3	12.9	13.1	0.20
18	Fairbanks Morse	590.4	100.4	7.3	12.9	13.1	0.20
24	Cummins Diesel 378F2	18.6	4.1	1.3	1.5	0.4	0.00
76	Various	380.2	83.4	27.0	30.3	0.1	0.25
77	Caterpillar 3408	57.7	12.7	4.1	4.6	0.0	0.00
78	Caterpillar C27	57.5	6.7	1.5	1.0	0.0	0.05
	Flares						
25	GKN Birwelco LTD	5,605.0	30,497.7	1,792.8	11,539.7	6,533.3	269.10
26	GKN Birwelco LTD	280.2	1,524.9	89.6	577.0	326.7	8.12
27	Halliburton	280.2	1,524.9	89.6	577.0	326.7	8.12
	Gasoline Dispensing Facility						
75	Gasoline Dispensing Facility	0	0	0	14.4	0	0.82
	Significant Unit Total	10,978.2	34,574.3	2,062.7	12,787.1	7702.0	293.8
	Insignificant Units						
N/A	6 Tioga Heaters	2.3	0.6	0.2	0.04	0.02	0.0
37	Scale Inhibitor	0	0	0	0.0	0	0.0
38	Emulsion Breaker	0	0	0	0.0	0	0.0
39	Anti-Foam	0	0	0	0.0	0	0.0
40	Corrosion Inhibitor	0	0	0	0.0	0	0.0
41	Biocide	0	0	0	0.2	0	0.2
42	Biocide	0	0	0	0.2	0	0.2
43	MEG (60%)	0	0	0	0.0	0	0.0
44	Methanol	0	0	0	0.0	0	0.0
45	Arctic No. 1 Diesel	0	0	0	0.0	0	0.0
46	Methanol	0	0	0	0.0	0	0.0
47	Scale Inhibitor	0	0	0	0.0	0	0.0
48	TEG	0	0	0	0.0	0	0.0
	Insignificant Unit Total	2.30	0.58	0.23	0.73	0.02	0.47
	Total (Significant and Insignificant)	10,980.5	34,574.9	2,062.9	12,787.8	7702.1	294.2
	Major/Minor	Major	Major	Major	Major	NA	NA
	Total Assessable Emissions	**68,402**					

Significant Emission Unit Inventory
Hilcorp Alaska, LLC - Endicott Production Facility

EU ID	Tag No.	Emission Unit Name	Emission Unit Description	Fuel	Rating/Size	Maximum Operation	Construction Date*
			Turbines				
1	GTRB-1510A	Nuovo-Pignone Frame 5D	Main Gas Compressor Turbine	FG	43,000 bhp ISO	8,760 hr/yr	Upgraded 1999
2	GTRB-1510B	Nuovo-Pignone Frame 5D	Main Gas Compressor Turbine	FG	43,000 bhp ISO	8,760 hr/yr	Upgraded 1999
3	GTRB-1405	Nuovo-Pignone Frame 1	NGL Compressor Turbine	FG	5,400 bhp ISO	8,760 hr/yr	1986-87
4	GTRB-1802	Ruston Tornado	Water Injection Pump Turbine	FG	8,485 bhp ISO	8,760 hr/yr	1986-87
5	GTRB-1907	Ruston Tornado	Water Injection Pump Turbine	FG	8,485 bhp ISO	8,760 hr/yr	1986-87
6	GTRB-E3-4501	Ruston Tornado	Generator Turbine	FG	8,717 bhp ISO	8,760 hr/yr	1986-87
7	GTRB-E3-4502	Ruston Tornado	Generator Turbine	FG	8,717 bhp ISO	8,760 hr/yr	1986-87
8	GTRB-E3-4503	Ruston Tornado	Generator Turbine	FG	8,717 bhp ISO	8,760 hr/yr	1986-87
9	GTRB-E3-4504	Ruston Tornado	Generator Turbine	FG	8,717 bhp ISO	8,760 hr/yr	1986-87
10	GTRB-E3-9210	Nuovo-Pignone PGT-5	MI Compressor Turbine	FG	0 bhp ISO	8,760 hr/yr	1999
			Heaters				
11	H-3002	Claudius Peters	Utility/Process Heater	FG	97.9 MMBtu/hr	4,656 hr/yr	1986-87
12	H-3031	ENTECH	Building Heat Medium Heater	FG	40.5 MMBtu/hr	8,760 hr/yr	1986-87
14	H-V-E3-1401	BS&B	TEG Reboiler	FG	7.0 MMBtu/hr	8,760 hr/yr	New Burner 1997
15	H-E3-1404	CE NATCO	NGL Reboiler	FG	27.0 MMBtu/hr	8,760 hr/yr	1986-87
			Engines				
17	GNED-E3-4505	Fairbanks Morse	Emergency Generator	Diesel	4,168 bhp	504 hr/yr	1986-87
18	GNED-E3-4506	Fairbanks Morse	Emergency Generator	Diesel	4,168 bhp	504 hr/yr	1986-87
24	PED-4005	Cummins Diesel 378F2	Emergency Fire Water Pump	Diesel	137 bhp	400 hr/yr	1986-87
76	None	Various	Backup Generator(s)	Diesel	2,800 hp	8,760 hr/yr	Varies
77	None	Caterpillar 3408	Mud Pump	Diesel	425 hp	1,400 hr/yr	2016
78	None	Caterpillar C27	Emergency Engine	Diesel	1,041 hp	500 hr/yr	2009 Model Year (2023 Install)
			Flares				
25	H-1602 (HP)	GKN Birwelco LTD	HP Flare	FG	500 MMscfd	1.48 MMscfd	Modified 1999
26	H-1601 (LP)	GKN Birwelco LTD	LP Flare	FG	25 MMscfd		1986-87
27	None	Halliburton	Portable Flare	FG	25 MMscfd	208 MMscf/yr	1986-87
			Gasoline Dispensing Facility				
75	None	Gasoline storage tanks and associated equipment components in vapor or liquid gasoline service	Gasoline Dispensing Facility	N/A	<100,000 gal/mo	N A	On or before November 9, 2006

*Never installed and removed from the source through an OPCN

Insignificant Emission Unit Inventory
Hilcorp Alaska, LLC - Endicott Production Facility

EU ID	Tag No.	Emission Unit Name	Emission Unit Description	Fuel	Rating/Size	Maximum Operation	Insignificant Status
N/A	N/A	Tioga Heaters	6 Tioga Heaters	Diesel	0.6 MMBtu/hr, each	8,760 hr/yr	18 AAC 50.326(g)(7)
37	T-E3-1101	Storage Tank	Scale Inhibitor	N/A	20,000 gal	8,760 hr/yr	18 AAC 50.326(e)
38	T-E3-1102	Storage Tank	Emulsion Breaker	N/A	20,000 gal	8,760 hr/yr	18 AAC 50.326(e)
39	T-E3-1103	Storage Tank	Anti-Foam	N/A	20,000 gal	8,760 hr/yr	18 AAC 50.326(e)
40	T-E3-1006	Storage Tank	Corrosion Inhibitor	N/A	17,000 gal	8,760 hr/yr	18 AAC 50.326(e)
41	T-E3-1902A	Storage Tank	Biocide	N/A	15,000 gal	8,760 hr/yr	18 AAC 50.326(e)
42	T-E3-1902B	Storage Tank	Biocide	N/A	15,000 gal	8,760 hr/yr	18 AAC 50.326(e)
43	T-E3-3001	Storage Tank	MEG (60%)	N/A	20,000 gal	8,760 hr/yr	18 AAC 50.326(e)
44	T-E3-4003	Storage Tank	Methanol	N/A	20,000 gal	8,760 hr/yr	18 AAC 50.326(e)
45	T-E3-3302	Storage Tank	Arctic No. 1 Diesel	N/A	53,298 gal	8,760 hr/yr	18 AAC 50.326(e)
46	T-E1-1001	Storage Tank	Methanol	N/A	20,000 gal	8,760 hr/yr	18 AAC 50.326(e)
47	T-E3-1008	Storage Tank	Scale Inhibitor	N/A	20,000 gal	8,760 hr/yr	18 AAC 50.326(e)
48	T-E3-1401	Storage Tank	TEG	N/A	11,400 gal	8,760 hr/yr	18 AAC 50.326(e)

Conversions:

Fuel Gas Heat Content:	903	Btu/scf
Diesel Fuel Heat Content:	137,000	Btu/gal
Diesel Fuel Density:	7	lb/gal
Diesel Engine Heat Rate:	7,000	Btu/hp-hr
Nuovo Pignone Frame 5 Heat Rate:	8,700	Btu/hp-hr
Nuovo Pignone Frame 1 Heat Rate:	10,400	Btu/hp-hr
Ruston Tornado Heat Rate:	8,311	Btu/hp-hr
Nuovo Pignone PGT-5 Heat Rate:	9,400	Btu/hp-hr

Significant Emission Unit Inventory - NO_X Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

						Base Scenario	Potential
EU ID	**Emission Unit Name**	**Reference**	**Emission Factor**	**Rating/Size**	**Maximum Operation**	**NO_X Emissions**	
			Turbines				
1	Nuovo-Pignone Frame 5D	BACT Limit	150 ppmvd	43,000 bhp ISO	8,760 hr/yr	918.2 tpy	918.2 tpy
2	Nuovo-Pignone Frame 5D	BACT Limit	150 ppmvd	43,000 bhp ISO	8,760 hr/yr	918.2 tpy	918.2 tpy
3	Nuovo-Pignone Frame 1	BACT Limit	125 ppmvd	5,400 bhp ISO	8,760 hr/yr	114.9 tpy	114.9 tpy
4	Ruston Tornado	BACT Limit	157 ppmvd	8,485 bhp ISO	8,760 hr/yr	181.2 tpy	181.2 tpy
5	Ruston Tornado	BACT Limit	157 ppmvd	8,485 bhp ISO	8,760 hr/yr	181.2 tpy	181.2 tpy
6	Ruston Tornado	BACT Limit	158 ppmvd	8,717 bhp ISO	8,760 hr/yr	187.3 tpy	187.3 tpy
7	Ruston Tornado	BACT Limit	158 ppmvd	8,717 bhp ISO	8,760 hr/yr	187.3 tpy	187.3 tpy
8	Ruston Tornado	BACT Limit	158 ppmvd	8,717 bhp ISO	8,760 hr/yr	187.3 tpy	187.3 tpy
9	Ruston Tornado	BACT Limit	158 ppmvd	8,717 bhp ISO	8,760 hr/yr	187.3 tpy	187.3 tpy
10	Nuovo-Pignone PGT-5	BACT Limit	125 ppmvd	0 bhp ISO	8,760 hr/yr	0.0 tpy	0.0 tpy
			Heaters				
11	Claudius Peters	BACT Limit	0.08 lb/MMBtu	97.9 MMBtu/hr	4,656 hr/yr	18.2 tpy	18.2 tpy
12	ENTECH	BACT Limit	0.08 lb/MMBtu	40.5 MMBtu/hr	8,760 hr/yr	14.2 tpy	14.2 tpy
14	BS&B	BACT Limit	0.16 lb/MMBtu	7 MMBtu/hr	8,760 hr/yr	4.9 tpy	4.9 tpy
15	CE NATCO	BACT Limit	0.15 lb/MMBtu	27 MMBtu/hr	8,760 hr/yr	17.7 tpy	17.7 tpy
			Engines				
17	Fairbanks Morse	BACT Limit	14.7 g/hp-hr	4,168 bhp	504 hr/yr	34.0 tpy	590.4 tpy
18	Fairbanks Morse	BACT Limit	14.7 g/hp-hr	4,168 bhp	504 hr/yr	34.0 tpy	590.4 tpy
24	Cummins Diesel 378F2	AP-42 Table 3.3-1	0.031 lb/hp-hr	137 bhp	400 hr/yr	0.8 tpy	18.6 tpy
76	Various	AP-42 Table 3.3-1	0.031 lb/hp-hr	2,800 hp	8,760 hr/yr	9.9 tpy	380.2 tpy
77	Caterpillar 3408	AP-42 Table 3.3-1	0.031 lb/hp-hr	425 hp	1,400 hr/yr	9.2 tpy	57.7 tpy
78	Caterpillar C27	Vendor Data	13.12 lb/hr	1,041 hp	500 hr/yr	3.3 tpy	57.5 tpy
			Flares				
25	GKN Birwelco LTD	AP-42 Table 13.5-1	0.068 lb/MMBtu	500 MMscfd	1.48 MMscfd	16.6 tpy	5,605.0 tpy
26	GKN Birwelco LTD	AP-42 Table 13.5-1	0.068 lb/MMBtu	25 MMscfd			280.2 tpy
27	Halliburton	AP-42 Table 13.5-1	0.068 lb/MMBtu	25 MMscfd	208 MMscf/yr	6.4 tpy	280.2 tpy
			Gasoline Dispensing Facility				
75	Gasoline storage tanks and associated equipment components in vapor or liquid gasoline service	N/A	N A	<100,000 gal/mo	N A	0 tpy	0 tpy
					Totals	**3,232.1 tpy**	**10,978.2 tpy**

Table D-3b. Insignificant Emission Unit Inventory - NO_X Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

EU ID	Emission Unit Name	Reference	Emission Factor	Rating/Size	Maximum Operation	NO_X Emissions
N/A	6 Tioga Heaters	AP-42 Table 1.3-1	20 lb/kgal	0.6 MMBtu/hr, each	8,760 hr/yr	2.3 tpy
37	Scale Inhibitor	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
38	Emulsion Breaker	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
39	Anti-Foam	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
40	Corrosion Inhibitor	N/A	N A	17,000 gal	8,760 hr/yr	0 tpy
41	Biocide	N/A	N A	15,000 gal	8,760 hr/yr	0 tpy
42	Biocide	N/A	N A	15,000 gal	8,760 hr/yr	0 tpy
43	MEG (60%)	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
44	Methanol	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
45	Arctic No. 1 Diesel	N/A	N A	53,298 gal	8,760 hr/yr	0 tpy
46	Methanol	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
47	Scale Inhibitor	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
48	TEG	N/A	N A	11,400 gal	8,760 hr/yr	0 tpy
						2.3 tpy

Conversions:

Fuel Gas Heat Content:	903	Btu/scf
Diesel Fuel Heat Content:	137,000	Btu/gal
Diesel Fuel Density:	7	lb/gal
Diesel Engine Heat Rate:	7,000	Btu/hp-hr
Nuovo Pignone Frame 5 Heat Rate:	8,700	Btu/hp-hr
Nuovo Pignone Frame 1 Heat Rate:	10,400	Btu/hp-hr
Ruston Tornado Heat Rate:	8,311	Btu/hp-hr
Nuovo Pignone PGT-5 Heat Rate:	9,400	Btu/hp-hr

Significant Emission Unit Inventory - CO Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

						Base Scenario	Potential
EU ID	**Emission Unit Name**	**Reference**	**Emission Factor**	**Rating/Size**	**Maximum Operation**	**CO Emissions**	
			Turbines				
1	Nuovo-Pignone Frame 5D	BACT Limit	109 lb/MMscf	43,000 bhp ISO	8,760 hr/yr	197.7 tpy	197.7 tpy
2	Nuovo-Pignone Frame 5D	BACT Limit	109 lb/MMscf	43,000 bhp ISO	8,760 hr/yr	197.7 tpy	197.7 tpy
3	Nuovo-Pignone Frame 1	BACT Limit	109 lb/MMscf	5,400 bhp ISO	8,760 hr/yr	29.7 tpy	29.7 tpy
4	Ruston Tornado	BACT Limit	109 lb/MMscf	8,485 bhp ISO	8,760 hr/yr	37.3 tpy	37.3 tpy
5	Ruston Tornado	BACT Limit	109 lb/MMscf	8,485 bhp ISO	8,760 hr/yr	37.3 tpy	37.3 tpy
6	Ruston Tornado	BACT Limit	109 lb/MMscf	8,717 bhp ISO	8,760 hr/yr	38.3 tpy	38.3 tpy
7	Ruston Tornado	BACT Limit	109 lb/MMscf	8,717 bhp ISO	8,760 hr/yr	38.3 tpy	38.3 tpy
8	Ruston Tornado	BACT Limit	109 lb/MMscf	8,717 bhp ISO	8,760 hr/yr	38.3 tpy	38.3 tpy
9	Ruston Tornado	BACT Limit	109 lb/MMscf	8,717 bhp ISO	8,760 hr/yr	38.3 tpy	38.3 tpy
10	Nuovo-Pignone PGT-5	AP-42 Table 3.1-2a	0.082 lb/MMBtu	0 bhp ISO	8,760 hr/yr	0.0 tpy	0.0 tpy
			Heaters				
11	Claudius Peters	BACT Limit	200 ppmv	97.9 MMBtu/hr	4,656 hr/yr	29.3 tpy	55.1 tpy
12	ENTECH	BACT Limit	0.035 lb/MMBtu	40.5 MMBtu/hr	8,760 hr/yr	6.2 tpy	6.2 tpy
14	BS&B	BACT Limit	0.035 lb/MMBtu	7 MMBtu/hr	8,760 hr/yr	1.1 tpy	1.1 tpy
15	CE NATCO	BACT Limit	0.035 lb/MMBtu	27 MMBtu/hr	8,760 hr/yr	4.1 tpy	4.1 tpy
			Engines				
17	Fairbanks Morse	AP-42 Table 3.4-1	0.0055 lb/hp-hr	4,168 bhp	504 hr/yr	5.8 tpy	100.4 tpy
18	Fairbanks Morse	AP-42 Table 3.4-1	0.0055 lb/hp-hr	4,168 bhp	504 hr/yr	5.8 tpy	100.4 tpy
24	Cummins Diesel 378F2	AP-42 Table 3.3-1	0.0068 lb/hp-hr	137 bhp	400 hr/yr	0.2 tpy	4.1 tpy
76	Various	AP-42 Table 3.3-1	0.0068 lb/hp-hr	2,800 hp	8,760 hr/yr	83.4 tpy	83.4 tpy
77	Caterpillar 3408	AP-42 Table 3.3-1	0.0068 lb/hp-hr	425 hp	1,400 hr/yr	2.0 tpy	12.7 tpy
78	Caterpillar C27	Vendor Data	1.52 lb/hr	1,041 hp	500 hr/yr	0.4 tpy	6.7 tpy
			Flares				
25	GKN Birwelco LTD	AP-42 Table 13.5-1	0.37 lb/MMBtu	500 MMscfd	1.48 MMscfd	90.3 tpy	30,497.7 tpy
26	GKN Birwelco LTD	AP-42 Table 13.5-1	0.37 lb/MMBtu	25 MMscfd			1524.9 tpy
27	Halliburton	AP-42 Table 13.5-1	0.37 lb/MMBtu	25 MMscfd	208 MMscf/yr	34.8 tpy	1524.9 tpy
			Gasoline Dispensing Facility				
75	Gasoline storage tanks and associated equipment components in vapor or liquid gasoline service	N/A	N A	<100,000 gal/mo	N A	0 tpy	0 tpy
					Totals	**916.1 tpy**	**34,574.3 tpy**

Table D-4b. Insignificant Emission Unit Inventory - CO Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

EU ID	Emission Unit Name	Reference	Emission Factor	Rating/Size	Maximum Operation	CO Emissions
N/A	6 Tioga Heaters	AP-42 Table 1.3-1	5 lb/kgal	0.6 MMBtu/hr, each	8,760 hr/yr	0.6 tpy
37	Scale Inhibitor	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
38	Emulsion Breaker	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
39	Anti-Foam	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
40	Corrosion Inhibitor	N/A	N A	17,000 gal	8,760 hr/yr	0 tpy
41	Biocide	N/A	N A	15,000 gal	8,760 hr/yr	0 tpy
42	Biocide	N/A	N A	15,000 gal	8,760 hr/yr	0 tpy
43	MEG (60%)	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
44	Methanol	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
45	Arctic No. 1 Diesel	N/A	N A	53,298 gal	8,760 hr/yr	0 tpy
46	Methanol	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
47	Scale Inhibitor	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
48	TEG	N/A	N A	11,400 gal	8,760 hr/yr	0 tpy
						0.6 tpy

Conversions:

Fuel Gas Heat Content:	903	Btu/scf
Diesel Fuel Heat Content:	137,000	Btu/gal
Diesel Fuel Density:	7	lb/gal
Diesel Engine Heat Rate:	7,000	Btu/hp-hr
Nuovo Pignone Frame 5 Heat Rate:	8,700	Btu/hp-hr
Nuovo Pignone Frame 1 Heat Rate:	10,400	Btu/hp-hr
Ruston Tornado Heat Rate:	8,311	Btu/hp-hr
Nuovo Pignone PGT-5 Heat Rate:	9,400	Btu/hp-hr

Significant Emission Unit Inventory - PM Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

						Base Scenario	Potential
EU ID	**Emission Unit Name**	**Reference**	**Emission Factor**	**Rating/Size**	**Maximum Operation**	**PM Emissions**	
			Turbines				
1	Nuovo-Pignone Frame 5D	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	43,000 bhp ISO	8,760 hr/yr	10.8 tpy	10.8 tpy
2	Nuovo-Pignone Frame 5D	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	43,000 bhp ISO	8,760 hr/yr	10.8 tpy	10.8 tpy
3	Nuovo-Pignone Frame 1	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	5,400 bhp ISO	8,760 hr/yr	1.6 tpy	1.6 tpy
4	Ruston Tornado	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	8,485 bhp ISO	8,760 hr/yr	2.0 tpy	2.0 tpy
5	Ruston Tornado	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	8,485 bhp ISO	8,760 hr/yr	2.0 tpy	2.0 tpy
6	Ruston Tornado	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	8,717 bhp ISO	8,760 hr/yr	2.1 tpy	2.1 tpy
7	Ruston Tornado	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	8,717 bhp ISO	8,760 hr/yr	2.1 tpy	2.1 tpy
8	Ruston Tornado	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	8,717 bhp ISO	8,760 hr/yr	2.1 tpy	2.1 tpy
9	Ruston Tornado	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	8,717 bhp ISO	8,760 hr/yr	2.1 tpy	2.1 tpy
10	Nuovo-Pignone PGT-5	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	0 bhp ISO	8,760 hr/yr	0.0 tpy	0.0 tpy
			Heaters				
11	Claudius Peters	AP-42 Table 1.4-2	7.6 lb/MMscf	97.9 MMBtu/hr	4,656 hr/yr	1.9 tpy	3.6 tpy
12	ENTECH	AP-42 Table 1.4-2	7.6 lb/MMscf	40.5 MMBtu/hr	8,760 hr/yr	1.5 tpy	1.5 tpy
14	BS&B	AP-42 Table 1.4-2	7.6 lb/MMscf	7 MMBtu/hr	8,760 hr/yr	0.3 tpy	0.3 tpy
15	CE NATCO	AP-42 Table 1.4-2	7.6 lb/MMscf	27 MMBtu/hr	8,760 hr/yr	1.0 tpy	1.0 tpy
			Engines				
17	Fairbanks Morse	AP-42 Table 3.4-2	0.0573 lb/MMBtu	4,168 bhp	504 hr/yr	0.4 tpy	7.3 tpy
18	Fairbanks Morse	AP-42 Table 3.4-2	0.0573 lb/MMBtu	4,168 bhp	504 hr/yr	0.4 tpy	7.3 tpy
24	Cummins Diesel 378F2	AP-42 Table 3.3-1	0.0022 lb/hp-hr	137 bhp	400 hr/yr	0.1 tpy	1.3 tpy
76	Various	AP-42 Table 3.3-1	0.0022 lb/hp-hr	2,800 hp	8,760 hr/yr	9.9 tpy	27.0 tpy
77	Caterpillar 3408	AP-42 Table 3.3-1	0.0022 lb/hp-hr	425 hp	1,400 hr/yr	0.7 tpy	4.1 tpy
78	Caterpillar C27	Vendor Data	0.35 lb/hr	1,041 hp	500 hr/yr	0.1 tpy	1.5 tpy
			Flares				
25	GKN Birwelco LTD	AP-42 Table 13.5-1	40 µg/L	500 MMscfd	1.48 MMscfd	5.3 tpy	1,792.8 tpy
26	GKN Birwelco LTD	AP-42 Table 13.5-1	40 µg/L	25 MMscfd			89.6 tpy
27	Halliburton	AP-42 Table 13.5-1	40 µg/L	25 MMscfd	208 MMscf/yr	2.0 tpy	89.6 tpy
			Gasoline Dispensing Facility				
75	Gasoline storage tanks and associated equipment components in vapor or liquid gasoline service	N/A	N A	<100,000 gal/mo	N A	0 tpy	0 tpy
					Totals	**59.3 tpy**	**2,062.7 tpy**

Table D-5b. Insignificant Emission Unit Inventory - PM Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

EU ID	Emission Unit Name	Reference	Emission Factor	Rating/Size	Maximum Operation	PM Emissions
N/A	6 Tioga Heaters	AP-42 Table 1.3-1	2 lb/kgal	0.6 MMBtu/hr, each	8,760 hr/yr	0.2 tpy
37	Scale Inhibitor	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
38	Emulsion Breaker	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
39	Anti-Foam	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
40	Corrosion Inhibitor	N/A	N A	17,000 gal	8,760 hr/yr	0 tpy
41	Biocide	N/A	N A	15,000 gal	8,760 hr/yr	0 tpy
42	Biocide	N/A	N A	15,000 gal	8,760 hr/yr	0 tpy
43	MEG (60%)	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
44	Methanol	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
45	Arctic No. 1 Diesel	N/A	N A	53,298 gal	8,760 hr/yr	0 tpy
46	Methanol	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
47	Scale Inhibitor	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
48	TEG	N/A	N A	11,400 gal	8,760 hr/yr	0 tpy
						0.2 tpy

Conversions:

Fuel Gas Heat Content:	903	Btu/scf
Diesel Fuel Heat Content:	137,000	Btu/gal
Diesel Fuel Density:	7	lb/gal
Diesel Engine Heat Rate:	7,000	Btu/hp-hr
Nuovo Pignone Frame 5 Heat Rate:	8,700	Btu/hp-hr
Nuovo Pignone Frame 1 Heat Rate:	10,400	Btu/hp-hr
Ruston Tornado Heat Rate:	8,311	Btu/hp-hr
Nuovo Pignone PGT-5 Heat Rate:	9,400	Btu/hp-hr

Significant Emission Unit Inventory - VOC Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

						Base Scenario	Potential
EU ID	**Emission Unit Name**	**Reference**	**Emission Factor**	**Rating/Size**	**Maximum Operation**	**VOC Emissions**	
			Turbines				
1	Nuovo-Pignone Frame 5D	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	43,000 bhp ISO	8,760 hr/yr	3.4 tpy	3.4 tpy
2	Nuovo-Pignone Frame 5D	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	43,000 bhp ISO	8,760 hr/yr	3.4 tpy	3.4 tpy
3	Nuovo-Pignone Frame 1	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	5,400 bhp ISO	8,760 hr/yr	0.5 tpy	0.5 tpy
4	Ruston Tornado	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	8,485 bhp ISO	8,760 hr/yr	0.6 tpy	0.6 tpy
5	Ruston Tornado	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	8,485 bhp ISO	8,760 hr/yr	0.6 tpy	0.6 tpy
6	Ruston Tornado	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	8,717 bhp ISO	8,760 hr/yr	0.7 tpy	0.7 tpy
7	Ruston Tornado	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	8,717 bhp ISO	8,760 hr/yr	0.7 tpy	0.7 tpy
8	Ruston Tornado	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	8,717 bhp ISO	8,760 hr/yr	0.7 tpy	0.7 tpy
9	Ruston Tornado	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	8,717 bhp ISO	8,760 hr/yr	0.7 tpy	0.7 tpy
10	Nuovo-Pignone PGT-5	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	0 bhp ISO	8,760 hr/yr	0.0 tpy	0.0 tpy
			Heaters				
11	Claudius Peters	AP-42 Table 1.4-2	5.5 lb/MMscf	97.9 MMBtu/hr	4,656 hr/yr	1.4 tpy	2.6 tpy
12	ENTECH	AP-42 Table 1.4-2	5.5 lb/MMscf	40.5 MMBtu/hr	8,760 hr/yr	1.1 tpy	1.1 tpy
14	BS&B	AP-42 Table 1.4-2	5.5 lb/MMscf	7 MMBtu/hr	8,760 hr/yr	0.2 tpy	0.2 tpy
15	CE NATCO	AP-42 Table 1.4-2	5.5 lb/MMscf	27 MMBtu/hr	8,760 hr/yr	0.7 tpy	0.7 tpy
			Engines				
17	Fairbanks Morse	AP-42 Table 3.4-1	0.00071 lb/hp-hr	4,168 bhp	504 hr/yr	0.7 tpy	12.9 tpy
18	Fairbanks Morse	AP-42 Table 3.4-1	0.00071 lb/hp-hr	4,168 bhp	504 hr/yr	0.7 tpy	12.9 tpy
24	Cummins Diesel 378F2	AP-42 Table 3.3-1	0.00247 lb/hp-hr	137 bhp	400 hr/yr	0.1 tpy	1.5 tpy
76	Various	AP-42 Table 3.3-1	0.00247 lb/hp-hr	2,800 hp	8,760 hr/yr	30.3 tpy	30.3 tpy
77	Caterpillar 3408	AP-42 Table 3.3-1	0.00247 lb/hp-hr	425 hp	1,400 hr/yr	0.7 tpy	4.6 tpy
78	Caterpillar C27	Vendor Data	0.23 lb/hr	1,041 hp	500 hr/yr	0.1 tpy	1.0 tpy
			Flares				
25	GKN Birwelco LTD	AP-42 Table 13.5-1	0.14 lb/MMBtu	500 MMscfd	1.48 MMscfd	34.2 tpy	11,539.7 tpy
26	GKN Birwelco LTD	AP-42 Table 13.5-1	0.14 lb/MMBtu	25 MMscfd			577.0 tpy
27	Halliburton	AP-42 Table 13.5-1	0.14 lb/MMBtu	25 MMscfd	208 MMscf/yr	13.2 tpy	577.0 tpy
			Gasoline Dispensing Facility				
75	Gasoline storage tanks and associated equipment components in vapor or liquid gasoline service	AP-42 Table 5.2-7	24 lb/kgal	<100,000 gal/mo	N A	14.4 tpy	14.4 tpy
					Totals	**109.1 tpy**	**12,787.1 tpy**

Table D-6b. Insignificant Emission Unit Inventory - VOC Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

EU ID	Emission Unit Name	Reference	Emission Factor	Rating/Size	Maximum Operation	VOC Emissions
N/A	6 Tioga Heaters	AP-42 Table 1.3-1	0.34 lb/kgal	0.6 MMBtu/hr, each	8,760 hr/yr	0.039 tpy
37	Scale Inhibitor	TANKS 4.0.9d		20,000 gal	8,760 hr/yr	0.043 tpy
38	Emulsion Breaker	TANKS 4.0.9d		20,000 gal	8,760 hr/yr	0.001 tpy
39	Anti-Foam	TANKS 4.0.9d		20,000 gal	8,760 hr/yr	0.001 tpy
40	Corrosion Inhibitor	TANKS 4.0.9d		17,000 gal	8,760 hr/yr	0.043 tpy
41	Biocide	TANKS 4.0.9d		15,000 gal	8,760 hr/yr	0.238 tpy
42	Biocide	TANKS 4.0.9d		15,000 gal	8,760 hr/yr	0.238 tpy
43	MEG (60%)	TANKS 4.0.9d		20,000 gal	8,760 hr/yr	0.000 tpy
44	Methanol	TANKS 4.0.9d		20,000 gal	8,760 hr/yr	0.042 tpy
45	Arctic No. 1 Diesel	TANKS 4.0.9d		53,298 gal	8,760 hr/yr	0.003 tpy
46	Methanol	TANKS 4.0.9d		20,000 gal	8,760 hr/yr	0.042 tpy
47	Scale Inhibitor	TANKS 4.0.9d		20,000 gal	8,760 hr/yr	0.043 tpy
48	TEG	TANKS 4.0.9d		11,400 gal	8,760 hr/yr	0.000 tpy
						0.7 tpy

Conversions:

Fuel Gas Heat Content:	903	Btu/scf
Diesel Fuel Heat Content:	137,000	Btu/gal
Diesel Fuel Density:	7	lb/gal
Diesel Engine Heat Rate:	7,000	Btu/hp-hr
Nuovo Pignone Frame 5 Heat Rate:	8,700	Btu/hp-hr
Nuovo Pignone Frame 1 Heat Rate:	10,400	Btu/hp-hr
Ruston Tornado Heat Rate:	8,311	Btu/hp-hr
Nuovo Pignone PGT-5 Heat Rate:	9,400	Btu/hp-hr

Significant Emission Unit Inventory - SO_2 Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

						Base Scenario	Potential
EU ID	**Emission Unit Name**	**Reference**	**Emission Factor**	**Rating/Size**	**Maximum Operation**	**SO_2 Emissions**	
			Turbines				
1	Nuovo-Pignone Frame 5D	Permit Limit	425 ppmvd H_2S	43,000 bhp ISO	8,760 hr/yr	129.9 tpy	129.9 tpy
2	Nuovo-Pignone Frame 5D	Permit Limit	425 ppmvd H_2S	43,000 bhp ISO	8,760 hr/yr	129.9 tpy	129.9 tpy
3	Nuovo-Pignone Frame 1	Permit Limit	425 ppmvd H_2S	5,400 bhp ISO	8,760 hr/yr	19.5 tpy	19.5 tpy
4	Ruston Tornado	Permit Limit	425 ppmvd H_2S	8,485 bhp ISO	8,760 hr/yr	24.5 tpy	24.5 tpy
5	Ruston Tornado	Permit Limit	425 ppmvd H_2S	8,485 bhp ISO	8,760 hr/yr	24.5 tpy	24.5 tpy
6	Ruston Tornado	Permit Limit	425 ppmvd H_2S	8,717 bhp ISO	8,760 hr/yr	25.2 tpy	25.2 tpy
7	Ruston Tornado	Permit Limit	425 ppmvd H_2S	8,717 bhp ISO	8,760 hr/yr	25.2 tpy	25.2 tpy
8	Ruston Tornado	Permit Limit	425 ppmvd H_2S	8,717 bhp ISO	8,760 hr/yr	25.2 tpy	25.2 tpy
9	Ruston Tornado	Permit Limit	425 ppmvd H_2S	8,717 bhp ISO	8,760 hr/yr	25.2 tpy	25.2 tpy
10	Nuovo-Pignone PGT-5	Permit Limit	425 ppmvd H_2S	0 bhp ISO	8,760 hr/yr	0.0 tpy	0.0 tpy
			Heaters				
11	Claudius Peters	Permit Limit	425 ppmvd H_2S	97.9 MMBtu/hr	4,656 hr/yr	18.1 tpy	34.0 tpy
12	ENTECH	Permit Limit	425 ppmvd H_2S	40.5 MMBtu/hr	8,760 hr/yr	14.1 tpy	14.1 tpy
14	BS&B	Permit Limit	425 ppmvd H_2S	7 MMBtu/hr	8,760 hr/yr	2.4 tpy	2.4 tpy
15	CE NATCO	Permit Limit	425 ppmvd H_2S	27 MMBtu/hr	8,760 hr/yr	9.4 tpy	9.4 tpy
			Engines				
17	Fairbanks Morse	Permit Limit	0.1 wt.%S	4,168 bhp	504 hr/yr	0.751 tpy	13.1 tpy
18	Fairbanks Morse	Permit Limit	0.1 wt.%S	4,168 bhp	504 hr/yr	0.751 tpy	13.1 tpy
24	Cummins Diesel 378F2	Permit Limit	0.1 wt.%S	137 bhp	400 hr/yr	0.0 tpy	0.4 tpy
76	Various	Permit Limit	0.0015 wt.%S	2,800 hp	8,760 hr/yr	0.1 tpy	0.1 tpy
77	Caterpillar 3408	Permit Limit	0.0015 wt.%S	425 hp	1,400 hr/yr	0.0 tpy	0.0 tpy
78	Caterpillar C27	NSPS Subpart IIII	0.0015 wt.%S	1,041 hp	500 hr/yr	0.003 tpy	0.05 tpy
			Flares				
25	GKN Birwelco LTD	Permit Limit	425 ppmvd H_2S	500 MMscfd	1.48 MMscfd	19.3 tpy	6,533.3 tpy
26	GKN Birwelco LTD	Permit Limit	425 ppmvd H_2S	25 MMscfd			326.7 tpy
27	Halliburton	Permit Limit	425 ppmvd H_2S	25 MMscfd	208 MMscf/yr	7.4 tpy	326.7 tpy
			Gasoline Dispensing Facility				
75	Gasoline storage tanks and associated equipment components in vapor or liquid gasoline service	N/A	N A	<100,000 gal/mo	N A	0 tpy	0 tpy
					Totals	**501.2 tpy**	**7,702.0 tpy**

Table D-7b. Insignificant Emission Unit Inventory - SO_2 Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

EU ID	Emission Unit Name	Reference	Emission Factor	Rating/Size	Maximum Operation	SO_2 Emissions
N/A	6 Tioga Heaters	Permit Limit	0.0015 wt.%S	0.6 MMBtu/hr, each	8,760 hr/yr	0.02 tpy
37	Scale Inhibitor	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
38	Emulsion Breaker	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
39	Anti-Foam	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
40	Corrosion Inhibitor	N/A	N A	17,000 gal	8,760 hr/yr	0 tpy
41	Biocide	N/A	N A	15,000 gal	8,760 hr/yr	0 tpy
42	Biocide	N/A	N A	15,000 gal	8,760 hr/yr	0 tpy
43	MEG (60%)	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
44	Methanol	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
45	Arctic No. 1 Diesel	N/A	N A	53,298 gal	8,760 hr/yr	0 tpy
46	Methanol	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
47	Scale Inhibitor	N/A	N A	20,000 gal	8,760 hr/yr	0 tpy
48	TEG	N/A	N A	11,400 gal	8,760 hr/yr	0 tpy
						0.0 tpy

Conversions:

Fuel Gas Heat Content:	903	Btu/scf
Diesel Fuel Heat Content:	137,000	Btu/gal
Diesel Fuel Density:	7	lb/gal
Diesel Engine Heat Rate:	7,000	Btu/hp-hr
Nuovo Pignone Frame 5 Heat Rate:	8,700	Btu/hp-hr
Nuovo Pignone Frame 1 Heat Rate:	10,400	Btu/hp-hr
Ruston Tornado Heat Rate:	8,311	Btu/hp-hr
Nuovo Pignone PGT-5 Heat Rate:	9,400	Btu/hp-hr

Permit Number: 0

HAPs Summary - Base Scenario
Hilcorp Alaska, LLC - Endicott Production Facility

Hazardous Air Pollutant	Significant Units																	Insignificant Units		Total
	Emissions per Unit (tons)																			
	1/2	3	4/5	6/7/8/9	10	11	12	14	15	17/18	24	76	77	78	25/26 (Combined)	27	75	Diesel-Fired Tioga Heater	Misc. Tanks	HAP Emissions
Acetaldehyde	6.55E-02	9.84E-03	1.24E-02	1.27E-02	0.00E+00	----	----	----	----	1.85E-04	1.47E-04	6.58E-02	1.60E-03	4.59E-05	1.16E-02	4.47E-03	----	----	4.76E-01	0.78
Acrolein	1.05E-02	1.57E-03	1.98E-03	2.03E-03	0.00E+00	----	----	----	----	5.79E-05	1.77E-05	7.94E-03	1.93E-04	1.44E-05	2.70E-03	2.70E-03	----	----	----	0.05
Benzene	1.97E-02	2.95E-03	3.71E-03	3.81E-03	0.00E+00	5.30E-04	4.12E-04	7.13E-05	2.75E-04	5.71E-03	1.79E-04	8.01E-02	1.94E-03	1.41E-03	4.29E-02	1.65E-02	1.30E-01	4.11E-06	----	0.35
1,3 Butadiene	----	----	----	----	----	----	----	----	----	----	7.50E-06	3.36E-03	8.14E-05	----	----	----	----	----	----	0.00
Ethyl benzene	5.24E-02	7.87E-03	9.88E-03	1.02E-02	0.00E+00	----	----	----	----	----	----	----	----	----	3.89E-01	1.50E-01	1.44E-02	1.22E-06	1.00E-05	0.73
Formaldehyde	1.16E+00	1.75E-01	2.19E-01	2.25E-01	0.00E+00	1.89E-02	1.47E-02	2.55E-03	9.82E-03	5.80E-04	2.26E-04	1.44E-02	2.46E-03	1.44E-04	3.16E-01	1.22E-01	----	6.33E-04	----	4.35
n-Hexane	----	----	----	----	----	4.54E-01	3.53E-01	6.11E-02	2.36E-01	----	----	----	----	----	7.83E-03	3.02E-03	2.30E-01	----	----	1.35
Methanol	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8.42E-02	0.08
Nitrobenzene	----	----	----	----	----	5.30E-04	4.12E-04	7.13E-05	2.75E-04	----	----	----	----	----	----	----	----	----	----	0.00
Polycyclic Organic Matter (POM)	3.60E-03	5.41E-04	6.80E-04	6.98E-04	0.00E+00	----	----	----	----	1.56E-03	3.22E-05	1.44E-02	3.50E-04	3.86E-04	2.97E-03	1.14E-03	7.20E-02	9.61E-07	----	0.11
Naphthalene	2.13E-03	3.20E-04	4.02E-04	4.13E-04	0.00E+00	1.54E-04	4.12E-04	2.07E-05	7.99E-05	----	----	----	----	----	----	----	----	2.17E-05	----	0.01
Toluene	2.13E-01	3.20E-02	4.02E-02	4.13E-02	0.00E+00	8.58E-04	6.68E-04	1.15E-04	4.45E-04	2.07E-03	7.84E-05	3.51E-02	8.52E-04	5.12E-04	1.57E-02	6.03E-03	1.87E-01	1.19E-04	4.00E-05	0.96
Xylenes (isomers and mixture)	1.05E-01	1.57E-02	1.98E-02	2.03E-02	0.00E+00	----	----	----	----	1.42E-03	5.47E-05	2.45E-02	5.94E-04	3.52E-04	7.83E-03	3.02E-03	7.20E-02	2.09E-06	1.00E-05	0.46
Total VOC HAPs	1.63	0.25	0.31	0.32	0.00	0.48	0.37	0.06	0.25	0.01	0.00	0.25	0.01	0.00	0.80	0.31	0.82	0.00	0.56	9.31
Non Volatile Organic Compounds																				
Arsenic Compounds (inorganic including arsine)	----	----	----	----	----	5.05E-05	9.49E-05	6.79E-06	2.62E-05	----	----	----	----	----	----	----	----	----	----	0.00
Cadmium Compounds	----	----	----	----	----	2.78E-04	5.22E-04	3.73E-05	1.44E-04	----	----	----	----	----	----	----	----	----	----	0.00
Chromium Compounds	----	----	----	----	----	3.53E-04	6.65E-04	4.75E-05	1.83E-04	----	----	----	----	----	----	----	----	----	----	0.00
Manganese Compounds	----	----	----	----	----	9.59E-05	1.80E-04	1.29E-05	4.97E-05	----	----	----	----	----	----	----	----	----	----	0.00
Mercury Compounds	----	----	----	----	----	6.56E-05	1.23E-04	8.82E-06	3.40E-05	----	----	----	----	----	----	----	----	----	----	0.00
Total non-VOC HAPs	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.43E-04	1.59E-03	1.13E-04	4.37E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00
Total HAPs	1.63	0.25	0.31	0.32	0.00	0.48	0.37	0.06	0.25	0.01	0.00	0.25	0.01	0.00	0.80	0.31	0.82	0.00	0.56	9.31

Notes:
[1] See individual emissions unit category emissions calculations for details on methodology and assumptions.
[2] Because insignificant tank VOC emissions are so small, it is assumed that the HAP emissions from each tank and from all tanks combined is negligible. See VOC calculations for details.

Permit Numbe 0

HAPs Summary - Potential Scenario
Hilcorp Alaska, LLC - Endicott Production Facility

Hazardous Air Pollutant	Significant Units																			Insignificant		Total
	Emissions per Unit (tons)																					
	1/2	3	4/5	6/7/8/9	10	11	12	14	15	17/18	24	76	77	78	25	26	27	75	Diesel-Fired Tioga Heater	Misc. Tanks	HAP Emissions
Acetaldehyde	6.55E-02	9.84E-03	1.24E-02	1.27E-02	0.00E+00	----	----	----	----	3.22E-03	2.15E-03	6.58E-02	5.38E-03	8.04E-04	3.92E+00	1.96E-01	1.96E-01	----	----	4.76E-01	5.09
Acrolein	1.05E-02	1.57E-03	1.98E-03	2.03E-03	0.00E+00	----	----	----	----	1.01E-03	2.59E-04	7.94E-03	6.49E-04	2.52E-04	9.13E-01	4.56E-02	4.56E-02	----	----	----	1.05
Benzene	1.97E-02	2.95E-03	3.71E-03	3.81E-03	0.00E+00	9.97E-04	4.12E-04	7.13E-05	2.75E-04	9.92E-02	2.61E-03	8.01E-02	6.55E-03	2.48E-02	1.45E+01	7.25E-01	7.25E-01	1.30E-01	4.11E-06	----	16.44
1,3 Butadiene	----	----	----	----	----	----	----	----	----	----	1.09E-04	3.36E-03	----	----	----	----	----	----	----	----	0.00
Ethyl benzene	5.24E-02	7.87E-03	9.88E-03	1.02E-02	0.00E+00	----	----	----	----	----	----	----	----	----	1.31E+02	6.57E+00	6.57E+00	1.44E-02	1.22E-06	1.00E-05	144.73
Formaldehyde	1.16E+00	1.75E-01	2.19E-01	2.25E-01	0.00E+00	3.56E-02	1.47E-02	2.55E-03	9.82E-03	1.01E-02	3.30E-03	1.44E-02	8.28E-03	2.52E-03	1.07E+02	----	----	----	6.33E-04	----	110.72
n-Hexane	----	----	----	----	----	8.54E-01	3.53E-01	6.11E-02	2.36E-01	----	----	----	----	----	2.65E+00	1.32E-01	1.32E-01	2.30E-01	----	----	4.65
Methanol	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8.42E-02	0.08
Nitrobenzene	----	----	----	----	----	9.97E-04	4.12E-04	7.13E-05	2.75E-04	----	----	----	----	----	----	----	----	----	----	----	0.00
Polycyclic Organic Matter (POM)	3.60E-03	5.41E-04	6.80E-04	6.98E-04	0.00E+00	----	----	----	----	2.71E-02	4.70E-04	1.44E-02	1.18E-03	6.77E-03	1.00E+00	5.02E-02	5.02E-02	7.20E-02	9.61E-07	----	1.26
Naphthalene	2.13E-03	3.20E-04	4.02E-04	4.13E-04	0.00E+00	2.90E-04	4.12E-04	2.07E-05	7.99E-05	----	----	----	----	----	----	----	----	----	2.17E-05	----	0.01
Toluene	2.13E-01	3.20E-02	4.02E-02	4.13E-02	0.00E+00	1.61E-03	6.68E-04	1.15E-04	4.45E-04	3.59E-02	1.15E-03	3.51E-02	2.87E-03	8.97E-03	5.29E+00	2.65E-01	2.65E-01	1.87E-01	1.19E-04	4.00E-05	6.83
2,2,4-Trimethylpentane	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.15E-01	----	----	0.12
Xylenes (isomers and mixture)	1.05E-01	1.57E-02	1.98E-02	2.03E-02	0.00E+00	----	----	----	----	2.47E-02	7.98E-04	2.45E-02	2.00E-03	6.16E-03	2.65E+00	1.32E-01	1.32E-01	7.20E-02	2.09E-06	1.00E-05	3.41
Total VOC HAPs	1.63	0.25	0.31	0.32	0.00	0.89	0.37	0.06	0.25	0.20	0.01	0.25	0.03	0.05	269.10	8.12	8.12	0.82	0.00	0.56	294.37
Non Volatile Organic Compounds																					
Arsenic Compounds (inorganic including arsine)	----	----	----	----	----	9.49E-05	9.49E-05	6.79E-06	2.62E-05	----	----	----	----	----	----	----	----	----	----	----	0.00
Cadmium Compounds	----	----	----	----	----	5.22E-04	5.22E-04	3.73E-05	1.44E-04	----	----	----	----	----	----	----	----	----	----	----	0.00
Chromium Compounds	----	----	----	----	----	6.65E-04	6.65E-04	4.75E-05	1.83E-04	----	----	----	----	----	----	----	----	----	----	----	0.00
Manganese Compounds	----	----	----	----	----	1.80E-04	1.80E-04	1.29E-05	4.97E-05	----	----	----	----	----	----	----	----	----	----	----	0.00
Mercury Compounds	----	----	----	----	----	1.23E-04	1.23E-04	8.82E-06	3.40E-05	----	----	----	----	----	----	----	----	----	----	----	0.00
Total non-VOC HAPs	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-03	1.59E-03	1.13E-04	4.37E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00
Total HAPs	1.63	0.25	0.31	0.32	0.00	0.90	0.37	0.06	0.25	0.20	0.01	0.25	0.03	0.05	269.10	8.12	8.12	0.82	0.00	0.56	294.37

Notes:

[1] See individual emissions unit category emissions calculations for details on methodology and assumptions.

[2] Because insignificant tank VOC emissions are so small, it is assumed that the HAP emissions from each tank and from all tanks combined is negligible. See VOC calculations for details.

Gas-Fired Turbines - Estimated Potential HAP Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

Maximum Total Heat Input: 10,820,226 MMBtu/yr [1]

Section 112 Hazardous Air Pollutants			Source Category Emission Calculations		Base and Potential Emissions				
No.	CAS No.	Chemical Name	Emission Factor [2]	All Units	EU IDs 1/2	EU ID 3	EU IDs 4/5	EU IDs 6/7/8/9	EU ID 10
35	75070	Acetaldehyde	4.00E-05 lb/MMBtu	2.16E-01 tpy	6.55E-02 tpy	9.84E-03 tpy	1.24E-02 tpy	1.27E-02 tpy	0.00E+00 tpy
39	107028	Acrolein	6.40E-06 lb/MMBtu	3.46E-02 tpy	1.05E-02 tpy	1.57E-03 tpy	1.98E-03 tpy	2.03E-03 tpy	0.00E+00 tpy
48	71432	Benzene	1.20E-05 lb/MMBtu	6.49E-02 tpy	1.97E-02 tpy	2.95E-03 tpy	3.71E-03 tpy	3.81E-03 tpy	0.00E+00 tpy
99	100414	Ethyl benzene	3.20E-05 lb/MMBtu	1.73E-01 tpy	5.24E-02 tpy	7.87E-03 tpy	9.88E-03 tpy	1.02E-02 tpy	0.00E+00 tpy
109	5000	Formaldehyde	7.10E-04 lb/MMBtu	3.84E+00 tpy	1.16E+00 tpy	1.75E-01 tpy	2.19E-01 tpy	2.25E-01 tpy	0.00E+00 tpy
145	91203	Naphthalene	1.30E-06 lb/MMBtu	7.03E-03 tpy	2.13E-03 tpy	3.20E-04 tpy	4.02E-04 tpy	4.13E-04 tpy	0.00E+00 tpy
162	N/A	Polycylic Organic Matter	2.20E-06 lb/MMBtu	1.19E-02 tpy	3.60E-03 tpy	5.41E-04 tpy	6.80E-04 tpy	6.98E-04 tpy	0.00E+00 tpy
176	108883	Toluene	1.30E-04 lb/MMBtu	7.03E-01 tpy	2.13E-01 tpy	3.20E-02 tpy	4.02E-02 tpy	4.13E-02 tpy	0.00E+00 tpy
188	106423	Xylenes (isomers and mixture)	6.40E-05 lb/MMBtu	3.46E-01 tpy	1.05E-01 tpy	1.57E-02 tpy	1.98E-02 tpy	2.03E-02 tpy	0.00E+00 tpy
		Total HAP Emissions		**5.40 tpy**	**1.64 tpy**	**0.25 tpy**	**0.31 tpy**	**0.32 tpy**	**0.00 tpy**

Notes/Comments:

[1] Total heat consumption based on maximum full-time operation or permit-limited operation as noted below:

(2) 43,000 hp	Nuovo-Pignone Frame 5D		
	Potential Fuel Use/Heat Input (EU ID 1)	3,277,116.0	MMBtu @ 8,760 hr/yr
	Potential Fuel Use/Heat Input (EU ID 2)	3,277,116.0	MMBtu @ 8,760 hr/yr
(1) 5,400 hp	Nuovo-Pignone Frame 1		
	Potential Fuel Use/Heat Input (EU ID 3)	491,961.6	MMBtu @ 8,760 hr/yr
(2) 8,485 hp	Ruston Tornado		
	Potential Fuel Use/Heat Input (EU ID 4)	617,745.0	MMBtu @ 8,760 hr/yr
	Potential Fuel Use/Heat Input (EU ID 5)	617,745.0	MMBtu @ 8,760 hr/yr
(4) 8,717 hp	Ruston Tornado		
	Potential Fuel Use/Heat Input (EU ID 6)	634,635.6	MMBtu @ 8,760 hr/yr
	Potential Fuel Use/Heat Input (EU ID 7)	634,635.6	MMBtu @ 8,760 hr/yr
	Potential Fuel Use/Heat Input (EU ID 8)	634,635.6	MMBtu @ 8,760 hr/yr
	Potential Fuel Use/Heat Input (EU ID 9)	634,635.6	MMBtu @ 8,760 hr/yr
(1) 7,300 hp	Nuovo-Pignone PGT-5		
	Potential Fuel Use/Heat Input (EU ID 10)	0.0	MMBtu @ 8,760 hr/yr
	Total Potential Fuel Use/Heat Input	TOTAL 10,820,226.0	MMBtu/yr

[2] Reference: AP-42, Tables 3.1-3

Diesel-Fired Reciprocating ICE > 600 hp
Hilcorp Alaska, LLC - Endicott Production Facility

Maximum Total Heat Input: 33,053 MMBtu/yr [1]

Section 112 Hazardous Air Pollutants			Source Category Emission Calculations		Base Emissions		Potential Emissions	
No.	CAS No.	Chemical Name	Emission Factor [2]	All Units	EU IDs 17/18	EU ID 78	EU IDs 17/18	EU ID 78
35	75070	Acetaldehyde	2.52E-05 lb/MMBtu	4.16E-04 tpy	1.85E-04 tpy	4.59E-05 tpy	3.22E-03 tpy	8.04E-04 tpy
39	107028	Acrolein	7.88E-06 lb/MMBtu	1.30E-04 tpy	5.79E-05 tpy	1.44E-05 tpy	1.01E-03 tpy	2.52E-04 tpy
48	71432	Benzene	7.76E-04 lb/MMBtu	1.28E-02 tpy	5.71E-03 tpy	1.41E-03 tpy	9.92E-02 tpy	2.48E-02 tpy
109	5000	Formaldehyde	7.89E-05 lb/MMBtu	1.30E-03 tpy	5.80E-04 tpy	1.44E-04 tpy	1.01E-02 tpy	2.52E-03 tpy
162	N/A	Polycylic Organic Matter	2.12E-04 lb/MMBtu	3.50E-03 tpy	1.56E-03 tpy	3.86E-04 tpy	2.71E-02 tpy	6.77E-03 tpy
176	108883	Toluene	2.81E-04 lb/MMBtu	4.64E-03 tpy	2.07E-03 tpy	5.12E-04 tpy	3.59E-02 tpy	8.97E-03 tpy
188	106423	Xylenes (isomers and mixture)	1.93E-04 lb/MMBtu	3.19E-03 tpy	1.42E-03 tpy	3.52E-04 tpy	2.47E-02 tpy	6.16E-03 tpy
			Total HAP Emissions	**0.03 tpy**	**0.01 tpy**	**0.003 tpy**	**0.20 tpy**	**0.05 tpy**

Notes/Comments:

[1] Total heat consumption based on maximum full-time operation or permit-limited operation as noted below:

(2) 4,168 hp	Fairbanks Morse		
	Potential Fuel Use/Heat Input (EU ID 17)	14,705	MMBtu/yr @ 504 hr/yr
	Potential Fuel Use/Heat Input (EU ID 18)	14,705	MMBtu/yr @ 504 hr/yr
	Emergency Generator		
( ) 1,041 hp	Potential Fuel Use/Heat Input (EU ID 58)	3,644	MMBtu/yr @ 500 hr/yr
	Total Potential Fuel Use/Heat Input TOTAL	33,053	MMBtu/yr

[2] Reference: AP-42, Tables 3.4-3 and 3.4-4

Diesel-Fired Reciprocating ICE ≤ 600 hp
Hilcorp Alaska, LLC - Endicott Production Facility

Maximum Total Heat Input: 176,245 MMBtu/yr [1]

Section 112 Hazardous Air Pollutants			Source Category Emission Calculations							
					Base Emissions		Potential Emissions		Base/Potential	
No.	CAS No.	Chemical Name	Emission Factor [2]	All Units	EU ID 24	EU ID 77	EU ID 24	EU ID 77	EU ID 76	
9	106990	1,3-Butadiene	3.91E-05 lb/MMBtu	3.45E-03 tpy	7.50E-06 tpy	8.14E-05 tpy	1.09E-04 tpy	2.74E-04 tpy	3.36E-03 tpy	
35	75070	Acetaldehyde	7.67E-04 lb/MMBtu	6.76E-02 tpy	1.47E-04 tpy	1.60E-03 tpy	2.15E-03 tpy	5.38E-03 tpy	6.58E-02 tpy	
39	107028	Acrolein	9.25E-05 lb/MMBtu	8.15E-03 tpy	1.77E-05 tpy	1.93E-04 tpy	2.59E-04 tpy	6.49E-04 tpy	7.94E-03 tpy	
48	71432	Benzene	9.33E-04 lb/MMBtu	8.22E-02 tpy	1.79E-04 tpy	1.94E-03 tpy	2.61E-03 tpy	6.55E-03 tpy	8.01E-02 tpy	
109	5000	Formaldehyde	1.18E-03 lb/MMBtu	1.04E-01 tpy	2.26E-04 tpy	2.46E-03 tpy	3.30E-03 tpy	8.28E-03 tpy	1.01E-01 tpy	
162	N/A	Polycylic Organic Matter	1.68E-04 lb/MMBtu	1.48E-02 tpy	3.22E-05 tpy	3.50E-04 tpy	4.70E-04 tpy	1.18E-03 tpy	1.44E-02 tpy	
176	108883	Toluene	4.09E-04 lb/MMBtu	3.60E-02 tpy	7.84E-05 tpy	8.52E-04 tpy	1.15E-03 tpy	2.87E-03 tpy	3.51E-02 tpy	
188	106423	Xylenes (isomers and mixture)	2.85E-04 lb/MMBtu	2.51E-02 tpy	5.47E-05 tpy	5.94E-04 tpy	7.98E-04 tpy	2.00E-03 tpy	2.45E-02 tpy	
		Total HAP Emissions		**0.34 tpy**	**0.00 tpy**	**0.01 tpy**	**0.01 tpy**	**0.03 tpy**	**0.33 tpy**	

Notes/Comments:

[1] Total heat consumption based on maximum full-time operation or permit-limited operation as noted below:

(1) 137 hp	Cummins Diesel 378F2		
	Potential Fuel Use/Heat Input (EU ID 24)	384	MMBtu/yr @ 400 hr/yr
(1) 2,800 hp	Backup Generator(s)		
	Potential Fuel Use/Heat Input (EU ID 76)	171,696	MMBtu/yr @ 8,760 hr/yr
(1) 425 hp	Caterpillar 3408		
	Potential Fuel Use/Heat Input (EU ID 77)	4,165	MMBtu/yr @ 1,400 hr/yr
Total Potential Fuel Use/Heat Input	TOTAL	176,245	MMBtu/yr

[2] Reference: AP-42, Tables 3.3-2

Significant and Insignificant Diesel-Fired Heaters and Boilers - Estimated Potential HAP Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

Maximum Total Heat Input: 230 kgal/yr [1]

Section 112 Hazardous Air Pollutants			Source Category Emission Calculations		
No.	**CAS No.**	**Chemical Name**	**Emission Factor [2]**	**All Units**	**Base/Potential Indiv. Insig. Heater**
48	71432	Benzene	2.14E-04 lb/kgal	2.46E-05 tpy	4.11E-06 tpy
99	100414	Ethyl benzene	6.36E-05 lb/kgal	7.32E-06 tpy	1.22E-06 tpy
109	5000	Formaldehyde	3.30E-02 lb/kgal	3.80E-03 tpy	6.33E-04 tpy
145	91203	Naphthalene	1.13E-03 lb/kgal	1.30E-04 tpy	2.17E-05 tpy
162	N/A	Polycylic Organic Matter	5.01E-05 lb/kgal	5.76E-06 tpy	9.61E-07 tpy
176	108883	Toluene	6.20E-03 lb/kgal	7.14E-04 tpy	1.19E-04 tpy
188	106423	Xylenes (isomers and mixture)	1.09E-04 lb/kgal	1.25E-05 tpy	2.09E-06 tpy
			Total HAP Emissions	**0.00 tpy**	**0.00 tpy**

Notes/Comments:

[1] Total heat consumption based on maximum full-time operation or permit-limited operation as noted below:

(6) 0.6 MMBtu/hr	Tioga Heaters		
	Potential Fuel Use/Heat Input (All 6 Units)		230.2 kgal @ 8,760 hr/yr
Total Potential Fuel Use/Heat Input		TOTAL	230.2 kgal/yr

[2] Reference: AP-42, Table 1.3-9

Gas-Fired Heaters - Estimated Potential HAP Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

Maximum Total Heat Input: 1,227 MMscf/yr [1]

Section 112 Hazardous Air Pollutants			Source Category Emission Calculations		Base Emissions	Potential Emissions		Base and Potential Emissions	
No.	CAS No.	Chemical Name	Emission Factor [2]	All Units	EU ID 11	EU ID 11	EU ID 12	EU ID 14	EU ID 15
46	N/A	Arsenic Compounds	2.00E-04 lb/MMscf	1.23E-04 tpy	5.05E-05 tpy	9.49E-05 tpy	3.93E-05 tpy	6.79E-06 tpy	2.62E-05 tpy
48	71432	Benzene	2.10E-03 lb/MMscf	1.29E-03 tpy	5.30E-04 tpy	9.97E-04 tpy	4.12E-04 tpy	7.13E-05 tpy	2.75E-04 tpy
58	N/A	Cadmium Compounds	1.10E-03 lb/MMscf	6.75E-04 tpy	2.78E-04 tpy	5.22E-04 tpy	2.16E-04 tpy	3.73E-05 tpy	1.44E-04 tpy
75	N/A	Chromium Compounds	1.40E-03 lb/MMscf	8.59E-04 tpy	3.53E-04 tpy	6.65E-04 tpy	2.75E-04 tpy	4.75E-05 tpy	1.83E-04 tpy
109	5000	Formaldehyde	7.50E-02 lb/MMscf	4.60E-02 tpy	1.89E-02 tpy	3.56E-02 tpy	1.47E-02 tpy	2.55E-03 tpy	9.82E-03 tpy
118	110543	N-Hexane	1.80E+00 lb/MMscf	1.10E+00 tpy	4.54E-01 tpy	8.54E-01 tpy	3.53E-01 tpy	6.11E-02 tpy	2.36E-01 tpy
127	N/A	Manganese Compounds	3.80E-04 lb/MMscf	2.33E-04 tpy	9.59E-05 tpy	1.80E-04 tpy	7.46E-05 tpy	1.29E-05 tpy	4.97E-05 tpy
128	N/A	Mercury Compounds	2.60E-04 lb/MMscf	1.60E-04 tpy	6.56E-05 tpy	1.23E-04 tpy	5.11E-05 tpy	8.82E-06 tpy	3.40E-05 tpy
145	91203	Naphthalene	6.10E-04 lb/MMscf	3.74E-04 tpy	1.54E-04 tpy	2.90E-04 tpy	1.20E-04 tpy	2.07E-05 tpy	7.99E-05 tpy
147	98953	Nitrobenzene	2.10E-03 lb/MMscf	1.29E-03 tpy	5.30E-04 tpy	9.97E-04 tpy	4.12E-04 tpy	7.13E-05 tpy	2.75E-04 tpy
176	108883	Toluene	3.40E-03 lb/MMscf	2.09E-03 tpy	8.58E-04 tpy	1.61E-03 tpy	6.68E-04 tpy	1.15E-04 tpy	4.45E-04 tpy
		Total HAP Emissions		**1.16 tpy**	**0.48 tpy**	**0.90 tpy**	**0.37 tpy**	**0.06 tpy**	**0.25 tpy**

Notes/Comments:

[1] Total heat consumption based on maximum full-time operation or permit-limited operation as noted below:

(1) 97.9 MMBtu/hr	Claudius Peters		
	Potential Fuel Use/Heat Input (EU ID 11)	504.6	MMscf @ 4,656 hr/yr
(1) 40.5 MMBtu/hr	ENTECH		
	Potential Fuel Use/Heat Input (EU ID 12)	392.8	MMscf @ 8,760 hr/yr
(1) 7.0 MMBtu/hr	BS&B		
	Potential Fuel Use/Heat Input (EU ID 14)	67.9	MMscf @ 8,660 hr/yr
(1) 27.0 MMBtu/hr	CE NATCO		
	Potential Fuel Use/Heat Input (EU ID 15)	261.8	MMscf @ 8,760 hr/yr
Total Potential Fuel Use/Heat Input	TOTAL	1,227.1	MMscf/yr

[2] Reference: AP-42, Table 1.4-3 & 1.4-4

Estimated Potential HAP Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

Maximum Total Heat Input: 540 MMscf/yr [1]

Section 112 Hazardous Air Pollutants			Source Category Emission Calculations		Base Emissions			Potential Emissions	
No.	CAS No.	Chemical Name	Emission Factor [2]	All Units	EU IDs 25 & 26	EU ID 27	EU ID 25	EU ID 26	EU ID 27
35	75070	Acetaldehyde	4.30E-02 lb/MMscf	1.16E-02 tpy	1.16E-02 tpy	4.47E-03 tpy	3.92E+00 tpy	1.96E-01 tpy	1.96E-01 tpy
39	107028	Acrolein	1.00E-02 lb/MMscf	2.70E-03 tpy	2.70E-03 tpy	1.04E-03 tpy	9.13E-01 tpy	4.56E-02 tpy	4.56E-02 tpy
48	71432	Benzene	1.59E-01 lb/MMscf	4.29E-02 tpy	4.29E-02 tpy	1.65E-02 tpy	1.45E+01 tpy	7.25E-01 tpy	7.25E-01 tpy
99	100414	Ethyl benzene	1.44E+00 lb/MMscf	3.89E-01 tpy	3.89E-01 tpy	1.50E-01 tpy	1.31E+02 tpy	6.57E+00 tpy	6.57E+00 tpy
109	5000	Formaldehyde	1.17E+00 lb/MMscf	3.16E-01 tpy	3.16E-01 tpy	1.22E-01 tpy	1.07E+02 tpy	5.34E+00 tpy	5.34E+00 tpy
118	110543	N-Hexane	2.90E-02 lb/MMscf	7.83E-03 tpy	7.83E-03 tpy	3.02E-03 tpy	2.65E+00 tpy	1.32E-01 tpy	1.32E-01 tpy
162	N/A	Polycylic Organic Matter	1.10E-02 lb/MMscf	2.97E-03 tpy	2.97E-03 tpy	1.14E-03 tpy	1.00E+00 tpy	5.02E-02 tpy	5.02E-02 tpy
176	108883	Toluene	5.80E-02 lb/MMscf	1.57E-02 tpy	1.57E-02 tpy	6.03E-03 tpy	5.29E+00 tpy	2.65E-01 tpy	2.65E-01 tpy
188	106423	Xylenes (isomers and mixture)	2.90E-02 lb/MMscf	7.83E-03 tpy	7.83E-03 tpy	3.02E-03 tpy	2.65E+00 tpy	1.32E-01 tpy	1.32E-01 tpy
		Total HAP Emissions		**0.80 tpy**	**0.80 tpy**	**0.31 tpy**	**269.10 tpy**	**13.45 tpy**	**13.45 tpy**

Notes/Comments:

[1] Total heat consumption based on maximum full-time operation or permit-limited operation as noted below:

(1) 500 MMscfd	HP Flare		
(1) 25 MMscfd	LP Flare		
	Potential Fuel Use/Heat Input (EU IDs 25 & 26)	540.2	MMscf @ 8,760 hr/yr
(1) 25 MMscfd	Portable Flare		
	Potential Fuel Use/Heat Input (EU ID 27)	208.0	MMscf @ 8,760 hr/yr
Total Potential Fuel Use/Heat Input	TOTAL	540.2	MMscf/yr

[2] Reference: VCAPCD

Table D-15. Gasoline Dispensing Facilities - Estimated Potential HAP Emissions
Hilcorp Alaska, LLC - Endicott Production Facility

Total Potential VOCs: 14.4 tpy [1]

Section 112 Hazardous Air Pollutants | **Source Category Emission Calculations**

No.	CAS No.	Chemical Name	Emission Factor [2]	EU ID 75
14	540841	2,2,4-Trimethylpentane	0.8 wt.%VOC	1.15E-01 tpy
48	71432	Benzene	0.9 wt.%VOC	1.30E-01 tpy
99	100414	Ethyl benzene	0.1 wt.%VOC	1.44E-02 tpy
118	110543	N-Hexane	1.6 wt.%VOC	2.30E-01 tpy
162	N/A	Polycylic Organic Matter	0.5 wt.%VOC	7.20E-02 tpy
176	108883	Toluene	1.3 wt.%VOC	1.87E-01 tpy
188	106423	Xylenes (isomers and mixture)	0.5 wt.%VOC	7.20E-02 tpy

Total HAP Emissions 0.82 tpy

Notes/Comments:

[1] Total VOC based on full time operation as noted below:

(1) <100,000 gal/mo Gasoline Dispensing Facility

Potential Fuel Use/Heat Input (EU ID 75)		14.4 tpy
Total Potential VOCs:	TOTAL	14.4 tpy

[2] Emission factors from Table 4, "Normal" column in *Developing a Consistent Methodology to Calculate VOC and HAP Evaporative Emissions for Stage I and Stage II Operations at Gasoline Service Stations for the 1999 NEI*