DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY OPERATING PERMIT

Permit No. AQ0035TVP02 Issue Date: October 15, 2012
Revision 7 Public Comment: October 8, 2016 Expiration Date: October 15, 2017

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Tesoro Alaska Company LLC**, for the operation of the **Kenai Refinery**.

The Kenai Refinery, Kenai Pipeline, and Nikiski Terminal are considered a single stationary source for purposes of determining applicability for New Source Review permitting (40 C.F.R. 51 and/or 52), Title V permitting (40 C.F.R. Part 70 and/or 71), and NESHAP major source criteria (40 C.F.R. 63.2).

This permit satisfies the obligation of the owner and operator to obtain an operating permit for refinery activities as set out in AS 46.14.130(b).

As set out in AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

All currently applicable stationary source-specific terms and conditions of Air Quality Air Quality Control Permit-to-Operate No. 9323-AA008, Construction Permit Nos. 9923-AC010 and 035CP04, and Minor Permit Nos. AQ0035MSS01, AQ0035MSS02, AQ0035MSS04, and AQ0035MSS05 have been incorporated into this operating permit**.**

Citations listed herein are contained within 18 AAC 50 dated August 1, 2012, Register 203. All Federal regulation citations are from those sections adopted by reference in this version of regulation in 18 AAC 50.040 unless otherwise specified.

Revision 7 becomes effective <insert date—30 days after issue date>.

John F. Kuterbach, Manager
Air Permits Program

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List of Abbreviations Used in this Permit

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
acfm	actual cubic feet per minute
AS	Alaska Statutes
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BHp	Brake Horsepower
Bpd	Barrels per day
C.F.R.	Code of Federal Regulations
The Act	Clean Air Act
CO	Carbon Monoxide
dscf	Dry standard cubic foot
EPA	US Environmental Protection Agency
EU	Emission Unit
FG	Fuel Gas composed of a combination of refinery gas (RG), NG and LPG
gr./dscf	grain per dry standard cubic foot (1 pound = 7000 grains)
GPH	gallons per hour
HAPs	Hazardous Air Pollutants [HAPs as defined in AS 46.14.990]
ID	Emission Unit Identification Number
kPa	kiloPascals
LAER	Lowest Achievable Emission Rate
LPG	Liquefied Petroleum Gas
LTPD	Long Tons per day
MACT	Maximum Achievable Control Technology [MACT as defined in 40 C.F.R. 63]
MMBtu/hr	Million British thermal units per hour
MMgal	Million gallons
MMSCF	Million standard cubic feet
MMSCF/d	Million standard cubic feet per day
MR&R	Monitoring, Recordkeeping, and Reporting
NESHAPs	Federal National Emission Standards for Hazardous Air Pollutants [NESHAPs as contained in 40 C.F.R. 61 and 63]
NG	Natural Gas
NOx	Nitrogen Oxides
NSPS	Federal New Source Performance Standards [NSPS as contained in 40 C.F.R. 60]
NTE	not to exceed
O & M	Operation and Maintenance
O_2	Oxygen
PAL	Plantwide Applicability Limitation
PM-10	Particulate Matter less than or equal to a nominal ten microns in diameter
ppbvd	Parts per billion by volume on a dry basis
ppm	Parts per million
ppmv, ppmvd	Parts per million by volume on a dry basis
psia	Pounds per Square Inch (absolute)
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
SIC.	Standard Industrial Classification
SO_2	Sulfur dioxide
scfm	cubic feet per minute at standard Conditions
TPH	Tons per hour
TPY	Tons per year
VOC	volatile organic compound [VOC as defined in 40 C.F.R. 51.100(s)]
VOL	volatile organic liquid [VOL as defined in 40 C.F.R. 60.111b, Subpart Kb]
vol%	volume percent
wt%	weight percent

Section 1. Stationary Source Information

Identification

Permittee:	**Tesoro Alaska Company LLC** 19100 Ridgewood Parkway San Antonio, Texas 78259
Stationary Source Name:	**Kenai Refinery**
Location:	Zone 5, 6728.6 km North, 589.2 km East
Physical Address:	Mile 22.4 Kenai Spur Highway 54741 Tesoro Road Kenai, AK 99611
Owner:	**Tesoro Alaska Company LLC** 19100 Ridgewood Parkway San Antonio, Texas 78259 (210) 626-6000 Office
Operator:	Tesoro Alaska Company LLC 54741 Tesoro Road PO Box 3369 Kenai, AK 99611
Permittee's Responsible Official:	Mr. Cameron Hunt, Vice President, Kenai Refinery PO Box 3369 Kenai, AK 99611
Designated Agent:	CT Corporation Systems 9360 Glacier Hwy, Suite 202 Juneau, AK 99801
Stationary Source and Building Contact:	Mr. Scott Rosin, Manager, Environmental, Health and Safety Tesoro Alaska Company LLC P.O. Box 3369, Kenai, AK 99611 (907) 776-3501 Office/(907) 776-3803 Fax
Fee Contact:	Ms. Aleja DeVito, Plant Controller Tesoro Alaska Company LLC P.O. Box 3369, Kenai, AK 99611 (907) 776-3816 Office aleja.j.devito@tsocorp.com
Permit Contact:	Ms. Michelle Lee, Environmental Superintendent Tesoro Alaska Company LLC P.O. Box 3369, Kenai, AK 99611 (907) 776-3594 Office/(907) 776-3803 Fax michelle.lee@tsocorp.com
Process Description SIC Code:	2911 - Petroleum Refining

[18 AAC 50.040(j)(3) & 50.326(a)]
[40 C.F.R. 71.5(c)(1 & 2)]

Section 2. Emission Unit Inventory and Description

Emission units listed in Table A have specific monitoring, recordkeeping, or reporting conditions in this permit. Emission unit descriptions and ratings are given for identification purposes only.

Table A - Emission Unit Inventory[1]

EU ID	Emission Unit Name	Emission Unit Description	Rating/Size	Fuel Type[2]	Installation/ Modification Date
Boilers and Heaters					
1	H-101A	Crude Heater	140 MMBtu/hr	FG/NG/LPG	1969
2	H-101B	Crude Heater	165 MMBtu/hr	FG/NG/LPG	1977/1997
3	H-201	Powerformer Preheater	31.8 MMBtu/hr	FG/NG/LPG	1975
4	H-202	Powerformer Preheater	51 MMBtu/hr	FG/NG/LPG	1975
5	H-203	Powerformer Preheater	27.9 MMBtu/hr	FG/NG/LPG	1975
6	H-204	Powerformer Reheater	53.8 MMBtu/hr	FG/NG/LPG	1980
7	H-205	Powerformer Reheater	48.8 MMBtu/hr	FG/NG/LPG	1980
8	H-401	Hydrocracker Recycle Gas Heater	38.9 MMBtu/hr	FG/NG/LPG	1981/1989
9	H-402	Hydrocracker Recycle Gas Heater	38 MMBtu/hr	FG/NG/LPG	1981/1989
10	H-403N	Hydrocracker Fractionator Reboiler	50 MMBtu/hr	FG/NG/LPG	1997
11	H-404	Hydrocracker Stabilizer Reboiler	64.4 MMBtu/hr	FG/NG/LPG	1981/1989
12	H-609	Hot Oil Heater	56 MMBtu/hr	FG/NG/LPG	1969
14	H-650	Asphalt Plant Heater	4.2 MMBtu/hr	NG	2002
15	H-701	Fired Steam Generator	36.6 MMBtu/hr	FG/NG/LPG	1969
16	H-702	Fired Seam Generator	36.6 MMBtu/hr	FG/NG/LPG	1969
17	H-704	Natural Gas Supply Heater	2 MMBtu/hr	FG/NG/LPG	1985
18	H-801	Fired Steam Generator	32 MMBtu/hr	FG/NG/LPG	1980
19	H-802	Hot Glycol Heater	10.8 MMBtu/hr	FG/NG/LPG	1980
20	H-1001	Hydrogen Reformer Furnace	152.3 MMBtu/hr	FG/NG/LPG	1981
22	H-1102	SRU No. 1 Reheater	1.65 MMBtu/hr	NG	1985
23	H-1103	SRU No. 2 Reheater	1.15 MMBtu/hr	NG	1985
24	H-1104	SRU No. 3 Reheater	1.05 MMBtu/hr	NG	1985
25	H-1105	SCOT Tail Gas Burner	2 MMBtu/hr	NG	1985
26	H-1106	SRU No. 4 Reheater	1.9 MMBtu/hr	NG	1985
27	H-1201/1203	PRIP Adsorber Feed Furnace	10.4 MMBtu/hr	FG/NG/LPG	1986
28	H-1202	PRIP Recycle H_2 Furnace	11.2 MMBtu/hr	FG/NG/LPG	1986
29	H-1701	Vacuum Tower Heater	91 MMBtu/hr	FG/NG/LPG	1994/2006
30	E-1400	Duct Burner For Steam Generation	36.5 MMBtu/hr	NG	1988
31	E-1410	Duct Burner For Steam Generation	36.5 MMBtu/hr	NG	1988
115[4]	H-1601	DDU Charge Heater	20.25 MMBtu/hr	FG	05/2007
116[4]	H-1602	Fractionator Tower Reboiler	23.7 MMBtu/hr	FG	05/2007

EU ID	Emission Unit Name	Emission Unit Description	Rating/Size	Fuel Type[2]	Installation/ Modification Date
119	H-1801	Naptha Splitter Reboiler	50.9 MMBtu/hr	NG/FG	10/2010
Turbines and Engines					
32	GT-1400	Cogen Turbine SOLAR Centaur 50-5500	50.9 MMBtu/hr	NG/LPG/Diesel	1988
33	GT-1410	Cogen Turbine SOLAR Centaur 50-5500	50.9 MMBtu/hr	NG/LPG/Diesel	1988
32A	GT-1400A	Cogen Turbine Upgrade DLN SOLAR Centaur 50-5900S	53.5 MMBtu/hr	NG/ Diesel	Tbd[5]
33A	GT-1410A	Cogen Turbine Upgrade DLN SOLAR Centaur 50-5900S	53.5 MMBtu/hr	NG/ Diesel	Tbd[5]
34	EG-704	Emergency Electric Generator – Utility	4.8 MMBtu/hr 686 hp	Diesel	1989
35	EG-801	Emergency Electric Generator – Cracker	6.1 MMBtu/hr 871 hp	Diesel	1969
36	P-605A	VTB Recip. Pump Engine – North	5.6 MMBtu/hr (800 hp)	NG	1969
37	P-605B	VTB Recip. Pump Engine – South	5.6 MMBtu/hr (800 hp)	NG	1969
38	P-708A	Firewater Pump Engine – North	2.0 MMBtu/hr (286 hp)	Diesel	1969
39	P-708B	Firewater Pump Engine – South	2.0 MMBtu/hr (286 hp)	Diesel	1969
40	P-708C	Firewater Pump Engine – Upper Tank Farm	4.3 MMBtu/hr (614 hp)	Diesel	1990
41	P-719C	Emergency Pump Engine – Cooling Tower	1.1 MMBtu/hr (157 hp)	NG	1969
121	EG-705	4 SRB Emergency ICE – Cummins GTA855e	256 hp	NG	2012
Flares					
42	J-801	Refinery Flare	3.0 MMBtu/hr[3]	NG, FG and Process Upset Gas	1981
43	SRU Flare	SRU Flare	0.14 MMBtu/hr[3]	NG, Process Upset Gas	1983
Soil Vapor Extraction and Air Strippers					
44	E77 SVE	Soil Vapor Extraction Unit	100 scfm	NG	2001/2002
45	LTF SVE	Soil Vapor Extraction Unit	400 scfm	NG	2002
48	AS-1320	Phillips/Marathon Air Stripper with Thermal Oxidizer	12,500 acfm	NG	1990

EU ID	Emission Unit Name	Emission Unit Description	Rating/Size	Fuel Type[2]	Installation/ Modification Date
Storage Tanks					
49	TK-03	DF A	1,050 gallons	N/A	1969
50	TK-04D	Wastewater	113,400 gallons	N/A	1992
51	TK-05	Sulfuric Acid	5,880 gallons	N/A	1990
56	TK-10	LSR/Isomerate – Floating Roof	2.1 MMgal	N/A	1968 – 1969
57	TK-11	Crude	2.1 MMgal	N/A	1968 – 1969
58	TK-12	Jet A – Floating Roof	12.6 MMgal	N/A	1/2/78
59	TK-13	Crude – Floating Roof	12.6 MMgal	N/A	2/4/81
60	TK-14	Crude – Floating Roof	12.6 MMgal	N/A	2/4/81
61	TK-20	Low S VTB/Cutter/LCO	9.37 MMgal	N/A	1968 – 1969
62	TK-22	DF A/Jet A/DF 2	4.2 MMgal	N/A	1/8/73
63	TK-23	HVGO/VTB	12.6 MMgal	N/A	1/2/78
64	TK-24	Gas Oil	2.1 MMgal	N/A	2/13/80
65	TK-25	High S VTB/VTB	17.85 MMgal	N/A	4/15/83
66	TK-30	DF 2/Jet A	420,000 gallons	N/A	1968 – 1969
67	TK-31	DF 2/DF 1	630,000 gallons	N/A	1969
68	TK-32	DF A/Jet A	2.94 MMgal	N/A	1968 – 1969
69	TK-33	Bunker/VTB	630,000 gallons	N/A	1968 – 1969
71	TK-35	DF 2/DF A	4.2 MMgal	N/A	3/7/73
72	TK-36	DF 2	8.4 MMgal	N/A	4/15/83
73	TK-37	Cutter/Jet A	4.2 MMgal	N/A	1969
74	TK-39	Hot Oil/Jet A	210,000 gallons	N/A	1969
75	TK-40	UL/P UL – Floating Roof	1.68 MMgal	N/A	1968 – 1969
76	TK-41	UL/P UL – Floating Roof	1.68 MMgal	N/A	1969
77	TK-42	Asphalt/Bunker	1.68 MMgal	N/A	1969/1996
78	TK-45	Naphtha – Floating Roof	4.2 MMgal	N/A	1/8/73
79	TK-51	Asphalt/VTB	840,000 gallons	N/A	1968 – 1969
80	TK-55	Asphalt	42,000 gallons	N/A	2002
81	TK-57	Asphalt	42,000 gallons	N/A	2002
82	TK-59	Asphalt Processing Concentrate	42,000 gallons	N/A	2002
83	TK-60	UL/Sidecut – Floating Roof	630,000 gallons	N/A	1969
84	TK-61	Jet B/Sidecut – Floating Roof	420,000 gallons	N/A	1968 – 1969
85	TK-62	P UL/UL – Floating Roof	2.1 MMgal	N/A	1/8/73
86	TK-63	UL – Floating Roof	2.1 MMgal	N/A	1/8/73
87	TK-64	UL – Floating Roof	4.2 MMgal	N/A	1975
88	TK-65	UL – Floating Roof	4.2 MMgal	N/A	8/15/74
89	TK-66	UL – Floating Roof	4.2 MMgal	N/A	8/15/74
90	TK-70	Butane	840,000 gallons	N/A	1968 – 1969

EU ID	Emission Unit Name	Emission Unit Description	Rating/Size	Fuel Type[2]	Installation/ Modification Date
91	TK-80	Propane	210,000 gallons	N/A	1968 – 1969
92	TK-94	Asphalt	42,000 gallons	N/A	1977/2002
93	TK-95	Asphalt	42,000 gallons	N/A	1969/2002
94	TK-97	Asphalt Additive	42,000 gallons	N/A	1969/2002
95	TK-V-1400	DF A	5,880 gallons	N/A	1968 – 1969
120	Tank 67	Naptha – Floating Roof	175, 000 barrels	N/A	2011
Process Units					
96	None	Crude Unit	72,000 Bpd	N/A	3/1/69; 2010
97	None	Powerformer	14,500 Bpd	N/A	11/73
98	None	LPG Unit	3,000 Bpd	N/A	11/29/73
99	None	Hydrocracker	12, 500 Bpd	N/A	6/79; 10/97
100	None	Hydrogen Unit	12.8 MMSCF/d	N/A	12/23/82
101	None	Sulfur Recovery Unit (SRU)	26 LTPD[4]	N/A	5/2007
102	None	PRIP Unit	4,400 Bpd	N/A	8/29/85
103	None	DIB Unit	6,000 Bpd	N/A	7/3/93
104	None	Vacuum Unit	25,500 Bpd	N/A	3/06
117	None	Distillate Desulfurization (DDU)	10,000 Bpd	N/A	5/07
128	None	Amine Unit	2.35 MMlb/d	N/A	1983
Oily Water Sewer System					
105	TK-04A	Slop Oil (Floating Roof)	13,440 gallons	N/A	1968 – 1969
106	TK-04B	Slop Oil (Floating Roof)	21,000 gallons	N/A	6/6/84
107	TK-04C	Slop Oil (Floating Roof)	126,000 gallons	N/A	1980
108	TK-96	Wastewater (Floating Roof)	42,000 gallons	N/A	1969/2001
109	VU Drains	Vacuum Unit Drain System	N/A	N/A	4/8/94
118[4]	DDU Drains	DDU Drain System	N/A	N/A	5/2007
122a	TK-723 Temporary Bypass Tank	Oil Water Separator (fixed roof)	21,000 gallons	N/A	06/03/13
122b	TK-723 Temporary Bypass Tank	Oil Water Separator (fixed roof)	21,000 gallons	N/A	06/03/13
122c	TK-723 Temporary Bypass Tank	Oil Water Separator (fixed roof)	21,000 gallons	N/A	06/03/13
123	TK-723	Oil Water Separator (floating roof)	144,000 gallons	N/A	07/01/2013
124	TK-724	Slop Oil Tank (fixed roof)	370 gallons	N/A	08/01/2013
125	CPI	Oil Water Separator (corrugated plate interceptor)	7,300 gallons	N/A	2001
NSPS GGGa Compressors					
126	C-810A	FGR Compressor 1	40,000 scf/hr	N/A	2016

EU ID	Emission Unit Name	Emission Unit Description	Rating/Size	Fuel Type[2]	Installation/ Modification Date
127	C-810B	FGR Compressor 2	40,000 scf/hr	N/A	2016

Notes:

1. The following emission units (as identified in the initial Title V Permit No. AQ0035TVP01) have been removed from the inventory table and their associated MR&R requirements:
    a. EU ID 13 (H-612, Residual Oil heater) is no longer in use. EU ID 21 (H-1101, SRU Reaction Furnace) is not an independent source and does not emit significant levels of regulated air pollutants. It is a process operation of which the only possible product of combustion that could be carried unchanged through the system would be trace levels of CO, which would be re-burned in the tail gas incinerator (Scot tail gas burner, EU ID 25) to form CO_2.
    b. EU IDs 46 (SI SVE/TO, Soil vapor Extraction Unit) and EU ID 47 (AS 1310, Surface Impoundment Air Stripper) are no longer used.
    c. EU IDs 52, 53, and 55 (Tanks TK-06, 07, and 09) are no longer in service.
    d. EU IDs 54 and 70 (Tanks TK-08 and TK-34) hold water and are not sources of regulated emissions.
    e. EU IDs 111, 112, 113, and 114 (Tank Bottom Cleaning Equipment) were never installed.
2. NG means Natural Gas. LPG means Liquefied Petroleum Gas. FG means Fuel Gas composed of a combination of refinery gas (RG), NG and LPG. The Permittee has demonstrated that this fuel gas used in the stationary source meets the definition of "gas" given in Guidance No. AWQ 02-014, Topic #4, 4/2/02.
3. Flare ratings are based on purge rates. EU ID 42 rating changed from 1 MMBtu/hr based on NG fuel used as pilot and sweep/purge rates to 3 MMBtu/hr based on purge rates. The 3 MMBtu/hr rating comes from the three pilot gas lines (0.2 MMBtu/hr) and the flare vent headers (average of 2.6 MMBtu/hr). EU ID 43 typical purge gas flow rate is 150 scf/hr, or 0.14 MMBtu/hr.
4. The newly added EU IDs 115 – 118 are components of the Distillate Desulfurization Unit (DDU) installed in 2007. Tesoro requested a minor permit modification (ref. Tesoro letters dated 2/23/06, 7/25/06, 2/14/07, 4/09/07, and 4/19/07) to include these units in the inventory list and increase the rating of EU ID 101 (SRU) from 19.3 LTPD to 26 LTPD. On 7/26/07, the Department determined that the DDU project did not trigger a minor or PSD permit.
5. Upgraded Solar turbines EU ID 32A and 33A to be installed as part of the facility's CoGeneration Turbine Upgrade Project as reported to ADEC on June 13, 2012. Upgraded Solar turbines will be equipped with Dry-Low NO_X (DLN) burners and will have maximum heat input rates of 53.5 MMBtu/hr on diesel fuel and 54.1 MMBtu/hr on natural gas. Final installation details not set for project timeline.
6. Removed API Canals EU 110 and used the EU110a,b,c for the Temporary Oil Water Separators [TK-723 Bypass]

[18 AAC 50.326(a)]
[40 C.F.R. 71.5(c)(3)]

Section 3. State Requirements

Visible Emissions Standards

1. Industrial Process and Fuel-Burning Equipment Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU IDs 1 through 12, 14 through 20, 25, 27 through 43, 115, 116, 119, and 121 *[H-101A, H-101B, H-201, H-202, H-203, H-204, H-205, H-401, H-402, H-403N, H-404, H-609, H-650, H-701, H-702, H-704, H-801, H-802, H-1001, H-1105, H-1201/1203, H-1202, H-1701, H-1801, E-1400, E-1410, GT-1400, GT-1410, GT-1400A, GT-1410A, EG-704, EG-801, P-605A, P-605B, P-708A, P-708B, P-708C, P-719C, J-801, SRU Flare, H-1601, H-1602, and EG-705]* listed in Table A to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.040(j), 50.055(a)(1), &50.326(j)]
[40 C.F.R. 71.6(a)(1)]

1.1. For EU IDs 1 through 12, 14 through 20, 25, 27 through 31, 36, 37, 41, 115, 116, 119, and 121 [H-101A, H-101B, H-201, H-202, H-203, H-204, H-205, H-401, H-402, H-403N, H-404, H-609, H-650, H-701, H-702, H-704, H-801, H-802, H-1001, H-1105, H-1201/1203, H-1202, H-1701, H-1801, E-1400, E-1410, P-605A, P-605B, P-719C, H-1601, H-1602, and EG-705], burn only gas[1] as fuel. Monitoring for these emission units shall consist of a certification in each operating report under Condition 141 that each of these emission units fired only gas. Report under Condition 140 if any fuel is burned other than gas.

1.2. For each of multi-fuel fired EU IDs 32 and 33 *[GT 1400 and GT 1410]*, and 32A and 33A *[GT 1400A and GT 1410A]* when installed, if operated on diesel fuel at any time during the operating report period, monitor, record and report according to Condition 9. Otherwise, monitoring for these emission units shall consist of a certification in each operating report required in Condition 141 that each of these emission units fired only gas.

1.3. For EU IDs 34 and 35 *[EG-704 and EG-801]*, as long as the emission unit does not exceed the operational hour limit in Table D, monitoring shall consist of an annual compliance certification under Condition 142 with the opacity standard in accordance with Condition 24.4.

1.4. For EU IDs 38 – 40 *[P-708A, P-708B, and P-708C]* if either EU IDs 38 or 39 exceed 425 operating hours in any calendar year, or EU ID 40 exceeds 275 operating hours in any calendar year, monitor, record and report in accordance with Conditions 2 through 4. Otherwise, monitoring shall consist of an annual compliance certification under Condition 142 with the particulate matter standard in accordance with Condition 24.4.

1.5. For EU IDs 42 and 43 *[J-801 and SRU Flare]*, monitor, record and report in accordance with Condition 5.

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)]

[1] For purposes of this permit, *gas* is defined as fuel gas (FG) and/or natural gas (NG) and/or LPG. The Permittee has demonstrated that the FG (a combination of refinery gas, NG and LPG) used in the stationary source does not cause opacity.

Visible Emissions Monitoring, Recordkeeping and Reporting

For Liquid Fuel-Fired Engines and Dual Fuel-Fired Turbines (EU IDs 32, 33, and 38 – 40)

2. Visible Emissions Monitoring. For EU IDs 38 through 40 *[P-708A, P-708B, and P-708C]* (if required by Condition 1.4) and EU IDs 32 and 33 *[GT-1400 and GT-1410]* or 32A and 33A *[GT 1400A and GT 1410A]* when installed (if required by Condition 9), the Permittee shall observe the exhaust for visible emissions using either the Method 9 Plan under Condition 2.1 or the Smoke/No-Smoke Plan under Condition 2.2. The Permittee may change visible-emissions plans for an emission unit at any time unless prohibited from doing so by Condition 2.3. The Permittee may for each unit elect to continue the visible emission monitoring schedule in effect from the previous permit at the time a renewed permit is issued, if applicable.

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(i)]

2.1. **Method 9 Plan.** For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.

a. **First Method 9 Observation**. For any unit changing from the Smoke/No-Smoke Plan of Condition 2.2, observe exhaust for 18 minutes within 14 calendar days.

(i) For any unit replaced during the term of this permit, observe exhaust for 18 minutes within 30 days of startup.

(ii) For each existing emission unit that exceeds the operational thresholds in Condition 1.4, observe the exhaust for 18 minutes of operations within 30 days after the calendar month during which that threshold has been exceeded, or within 30 days of the unit's next scheduled operations, whichever is later

b. **Monthly Method 9 Observations**. After the first Method 9 observation, perform 18-minute observations at least once in each calendar month that an emission unit operates.

c. **Semiannual Method 9 Observations**. After observing emissions for three consecutive operating months under Condition 2.1.b, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, perform 18-minute observations.

(i) Within six months after the preceding observation, or

(ii) For an emission unit with intermittent operations, during the next scheduled operation immediately following six months after the preceding observation.

d. **Annual Method 9 Observations**. After at least two semiannual 18-minute observations, unless a six-minute average is greater than 15 percent and

one or more individual observations are greater than 20 percent, perform 18-minute observations.

(i) Within twelve months after the preceding observation; or

(ii) For an emission unit with intermittent operations, during the next scheduled operation immediately following twelve months after the preceding observation.

e. **Increased Method 9 Frequency**. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that emission unit to at least monthly intervals, until the criteria in Condition 2.1.c for semiannual monitoring are met.

2.2. **Smoke/No Smoke Plan.** Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor.

a. **Initial Monitoring Frequency**. Observe the exhaust during each calendar day that an emission unit operates.

b. **Reduced Monitoring Frequency**. After the emission unit has been observed on 30 consecutive operating days, if the emission unit operated without visible smoke in the exhaust for those 30 days, then observe emissions at least once in every calendar month that an emission unit operates.

c. **Smoke Observed**. If smoke is observed, either begin the Method 9 Plan of Condition 2.1 or perform the corrective action required under Condition 2.3

2.3. **Corrective Actions Based on Smoke/No Smoke Observations**. If visible emissions are present in the exhaust during an observation performed under the Smoke/No Smoke Plan of Condition 2.2, then the Permittee shall either follow the Method 9 plan of Condition 2.1 or

a. initiate actions to eliminate smoke from the emission unit within 24 hours of the observation;

b. keep a written record of the starting date, the completion date, and a description of the actions taken to reduce smoke; and

c. after completing the actions required under Condition 2.3.a,

(i) take Smoke/No Smoke observations in accordance with Condition 2.2.

(A) at least once per day for the next seven operating days and until the initial 30 day observation period is completed; and

(B) continue as described in Condition 2.2.b; or

(ii) if the actions taken under Condition 2.3.a do not eliminate the smoke, or if subsequent smoke is observed under the schedule of Condition

2.3.c(i)(A), then observe the exhaust using the Method 9 Plan unless the Department gives written approval to resume observations under the Smoke/No Smoke Plan; after observing smoke and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke Plan under Condition 2.2.a.

3. Visible Emissions Recordkeeping. The Permittee shall keep records as follows:

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(ii)]

3.1. When using the Method 9 Plan of Condition 2.1,

a. the observer shall record

(i) the name of the stationary source, emission unit and location, emission unit type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet inSection 10;

(ii) the time, estimated distance to the emissions location, sun location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate) on the sheet at the time opacity observations are initiated and completed;

(iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;

(iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation record in Section 10, and

(v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

b. To determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet.

c. Calculate and record the highest 6-minute and 18-consecutive-minute averages observed.

3.2. If using the Smoke/No Smoke Plan of Condition 2.2, record the following information in a written log for each observation and submit copies of the recorded information upon request of the Department:

a. the date and time of the observation;

b. from Table A, the ID of the emission unit observed;

c. whether visible emissions are present or absent in the exhaust;

d. a description of the background to the exhaust during the observation;

e. if the emission unit starts operation on the day of the observation, the startup time of the emission unit;

f. name and title of the person making the observation; and

g. operating rate (load or fuel consumption rate).

4. Visible Emissions Reporting. The Permittee shall report visible emissions as follows:

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(iii)]

4.1. Include in each stationary source operating report under Condition 141, include for the period covered by the report:

a. which visible-emissions plan of Condition 2 was used for each emission unit; if more than one plan was used, give the time periods covered by each plan;

b. for each emission unit under the Method 9 Plan,

(i) copies of the observation results (i.e. opacity observations) for each emission unit that used the Method 9 Plan, except for the observations the Permittee has already supplied to the Department; and

(ii) a summary to include:

(A) number of days observations were made;

(B) highest six-minute average observed; and

(C) dates when one or more observed six-minute averages were greater than 20 percent;

c. for each emission unit under the Smoke/No Smoke Plan, the number of days that Smoke/No Smoke observations were made and which days, if any, that smoke was observed; and

d. a summary of any monitoring or recordkeeping required under Conditions 2 and 3 that was not done;

4.2. Report under Condition 140:

a. the results of Method 9 observations that exceed an average of 20 percent opacity for any six-minute period; and

b. if any monitoring under Condition 2 was not performed when required, report within three days of the date the monitoring was required.

For Flares (EU IDs 42 and 43)

5. **Flares**. The Permittee shall observe one daylight flare event[2] within 12 months of the preceding flare event observation to satisfy the State visible emissions monitoring requirements for flares for EU IDs 42 and 43 *[J-801 and SRU Flare]*. If no event exceeds 1 hour within that 12-month period, then the Permittee shall observe the next daylight flare event.

5.1. **Monitoring**. Monitor flare events using Method-9.

5.2. **Recordkeeping**. Record the following information for observed events:

a. the flare(s) EU ID number;

b. results of the Method-9 observations;

c. reason(s) for flaring;

d. date, beginning and ending time of event; and

e. volume of gas flared.

5.3. Monitoring of a flare event may be postponed for safety or weather reasons or because a qualified observer is not available. If the monitoring of a flare event is postponed for any of the reasons described in this condition, the Permittee shall include in the next operating report required by Condition 141, an explanation of the reason that the event was not monitored.

5.4. **Reporting**. Attach copies of the records required by Condition 5.2with the stationary source operating report required by Condition 141 for the period covered by that report.

5.5. Report under Condition 140 whenever the opacity standard in Condition 1 is exceeded.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]

Particulate Matter Emissions Standards

6. **Industrial Process and Fuel-Burning Equipment Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from EU IDs 1 through 12, 14 through 20, 25, 27 through 43, 115, 116, 119, and 121 *[H-101A, H-101B, H-201, H-202, H-203, H-204, H-205, H-401, H-402, H-403N, H-404, H-609, H-650, H-701, H-702, H-704, H-801, H-802, H-1001, H-1105, H-1201/1203, H-1202, H-1701, H-1801, E-1400, E-1410, GT-1400, GT-1410, GT-1400A, GT-1410A, EG-704, EG-801, P-605A, P-605B, P-708A, P-708B, P-708C, P-719C, J-801, SRU Flare, H-1601, H-1602. and EG-705]* listed in Table A to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.040(j), 50.055(b)(1) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

[2] For purposes of this permit, a *flare event* is a scheduled flaring of gas for one hour or more as a result of maintenance activities, such as during startup, shutdown or turnaround operations. It does not include non-scheduled operations, i.e. process upsets, emergency flaring, or de minims venting of gas incidental to normal operations.

6.1. For EU IDs 1 through 12, 14 through 20, 25, 27 through 31, 36, 37, 41, 48, 115, 116, 119, and 121 [H-101A, H-101B, H-201, H-202, H-203, H-204, H-205, H-401, H-402, H-403N, H-404, H-609, H-650, H-701, H-702, H-704, H-801, H-802, H-1001, H-1105, H-1201/1203, H-1202, H-1701, H-1801, E-1400, E-1410, P-605A, P-605B, P-719C, H-1601, H-1602, and EG-705], burn only gas[3] as fuel. Monitoring for these emission units shall consist of a certification in each operating report under Condition 141 that each of these emission unit(s) fired only gas. Report under Condition 140 if any fuel is burned other than gas.

6.2. For EU IDs 32 and 33 *[GT 1400 and GT 1410]*, (or 32A and 33A *[GT 1400A and GT 1410A]* when installed) if operated on diesel fuel at any time during the operating report period, the Permittee shall monitor, record and report according to Condition 9. Otherwise, monitoring for these emission units shall consist of a certification in each operating report required in Condition 141 that each of these emission units fired only gas.

6.3. For EU IDs 34 and 35 *[EG-704 and EG-801]*, as long as the emission unit does not exceed the operational hour limit in Table D, monitoring shall consist of an annual compliance certification under Condition 142 with the particulate matter standard in accordance with Condition 24.4.

6.4. For EU IDs 38 – 40 *[P-708A, P-708B, and P-708C]*, if either EU IDs 38 or 39 exceed 425 operating hours in any 12 month period, or EU ID 40 exceeds 275 operating hours in any 12 month period, monitor, record and report for that unit in accordance with Conditions 7 and 8. Otherwise, monitoring shall consist of an annual compliance certification under Condition 142 with the particulate matter standard in accordance with Condition 24.4.

6.5. For EU IDs 42 and 43 *[J-801 and SRU Flare]*, the Permittee must annually certify compliance under Condition 142 with the particulate matter standard.

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)]

Particulate Matter Monitoring, Recordkeeping and Reporting

For Liquid Fuel-Fired Engines and Dual Fuel-Fired Turbines (EU IDs 32, 33, and 38 – 40)

7. Particulate Matter Monitoring for Liquid Fuel-Fired Engines and Dual Fuel-Fired Turbines. The Permittee shall conduct source tests on liquid fuel-fired engines and turbines, EU IDs 32 and 33 *[GT 1400 and GT 1410]* or 32A and 33A *[GT 1400A and GT 1410A]* when installed per Condition 6.2, and EU IDs 38 – 40 *[P-708A, P-708B, and P-708C]* per Condition 6.4, to determine the concentration of particulate matter (PM) in the exhaust of an emission unit in accordance with this Condition 7.

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(i)]

7.1. Conduct the PM test or make repairs according to Condition 7.2 if:

[3] For purposes of this permit, *gas* is defined as fuel gas (FG) and/or natural gas (NG) and/or LPG. The Permittee has demonstrated that the FG (a combination of refinery gas, NG and LPG) used in the stationary source does not cause opacity.

a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or

b. for an emission unit with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the Department has waived this requirement in writing.

7.2. Except as provided in Condition 7.4 within six months of exceeding the criteria of Condition 7.1.a or 7.1.b, either

a. conduct a PM source test according to requirements set out in Section 5; or

b. make repairs so that emissions no longer exceed the criteria of Condition 7.1; to show that emissions are below those criteria, observe emissions as described in Condition 2.1 under load conditions comparable to those when the criteria were exceeded.

7.3. During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the highest average 6-minute opacity that was measured during each one-hour test run. Submit a copy of these observations with the source test report.

7.4. The automatic PM source test requirement in Conditions 7.1 and 7.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.

8. Particulate Matter Reporting for Liquid-Fired Engines and Dual Fuel-Fired Turbines. The Permittee shall report as follows:

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(iii)]

8.1. Report under Condition 140

a. the results of any PM source test that exceeds the PM emissions limit; or

b. if one of the criteria of Condition 7.1 was exceeded and the Permittee did not comply with either Condition 7.2.a or 7.2.b, this must be reported by the day following the day compliance with Condition 7.2 was required;

8.2. Report observations in excess of the threshold of Condition 7.1.b within 30 days of the end of the month in which the observations occur;

8.3. In each operating report under Condition 141, include for the period covered by the report:

a. the dates, EU ID(s), and results when an observed 18-minute average was greater than an applicable threshold in Condition 7.1;

b. a summary of the results of any PM testing under Condition 7; and

c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of Condition 7.1, if they were not already submitted.

VE &PM MR&R for Dual Fuel-Fired Units

For Dual Fuel-Fired Turbines (EU IDs 32 and 33)

9. The Permittee shall monitor, record, and report the monthly hours of operation when operating on diesel fuel.

9.1. For any of EU IDs 32 and 33 *[GT 1400 and GT 1410]* or 32A and 33A *[GT 1400A and GT 1410A]* (when installed) that does not exceed 400 hours of operations per calendar year on a back-up liquid fuel, monitoring of compliance for visible emissions and particulate matter is not required for that emission unit and monitoring shall consist of an annual certification under Condition 142 with Conditions 1 and 6.

9.2. For any of EU IDs 32 and 33 *[GT 1400 and GT 1410]* or 32A and 33A *[GT 1400A and GT 1410A]* when installed notify the Department and begin monitoring the affected emission unit according to Condition 9.3 no later than 15 days after the end of a calendar month in which the cumulative hours of operation for the calendar year exceed any multiple of 400 hours on a back-up liquid fuel. If the observation exceeds the limit in Condition 7.1.a (if operating on backup liquid fuel), monitor as described in Condition 7, as applicable by the type of emission unit. If the observation does not exceed the limit in Condition 7.1.a, no additional monitoring is required until the cumulative hours of operation exceed each subsequent multiple of 400 hours on back-up liquid fuel during a calendar year[4].

9.3. When required to do so by Condition 9.2, observe the exhaust, following 40 C.F.R. 60, Appendix A-4 Method 9 (adopted by reference in 18 AAC 50.040(a), for 18-minutes to obtain 72 consecutive 15-second opacity observations.

9.4. Keep records and report in accordance with Conditions 3, 4, and 8.

9.5. Report under Condition 140 if the Permittee fails to comply with Condition 9.3.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]

Sulfur Compound Emission Standards Requirements

10. Sulfur Compound Emissions. The Permittee shall comply with the following:

[18 AAC 50.040(j), 50.055(c) & (d), & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

10.1. For EU IDs 1, 3 through 7, 12, 15, 16, 18, 19, 20, 35 through 39, 41, and 42 [H-101A, H-201, H-202, H-203, H-204, H-205, H-609, H-701, H-702, H-801, H-802, H-1001, EG-801, P-605A, P-605B, P-708A, P-708B, P-719C, and J-801], fuel-burning equipment at the Refinery constructed or modified before November 1, 1982, do not cause or allow sulfur compound emissions averaged over three hours, expressed as sulfur dioxide (SO_2), to exceed 500 ppm.

[18 AAC 50.055(c)]

[4] If the requirement to monitor is triggered more than once in a calendar month, only one Method-9 observation is required to be conducted by the stated deadline for that month.

10.2. For EU IDs 2, 8 through 11, 14, 17, 27 through 31, 43, 115, 116, 119, and 121 [H-101B, H-401, H-402, H-403N, H-404, H-650, H-704, H-1201/1203, H-1202, H-1701, E-1400, E-1410, SRU Flare, H-1601, H-1602, H-1801, and EG-705] burning fuel gas[5], do not exceed a sulfur dioxide concentration, averaged over three hours, equal to the concentration of uncontrolled emissions that would result from burning gas containing 230 mg/dscm hydrogen sulfide (H_2S);

[18 AAC 50.055(d)(3)(A)]

10.3. For EU IDs 30, 31, 34, 40, 48, and 119 *[E-1400, E-1410, EG-704, P-708C, AS-1320, and H-1801]*, fuel-burning equipment at the Refinery constructed or modified after November 1, 1982 that does not burn fuel gas, do not exceed a sulfur dioxide concentration, averaged over three hours, equal to 500 ppm;

[18 AAC 50.055(d)(3)(B)]

10.4. For EU IDs 32 and 33 *[GT-1400, and GT-1410]* or EU IDs 32A and 33A *[GT-1400A and GT-1410A]*, fuel-burning equipment at the Refinery constructed or modified after November 1, 1982 burning a combination of fuel gas and other fuels, do not exceed a sulfur dioxide concentration, averaged over three hours, equal to a concentration based on the allowable emissions in Conditions 10.2 and 10.3 prorated by the proportion of fuel gas and other fuels to the total fuel burned in the equipment; and

[18 AAC 50.055(d)(3)(C)]

10.5. For EU ID 25 *[H-1105]*, located in EU ID 101 *[SRU]* rated at more than 20 long tons per day and constructed or modified after November 1, 1982, do not exceed:

a. 250 ppm sulfur dioxide at zero percent oxygen on a dry basis, or

b. 10 ppm hydrogen sulfide and a total of 300 ppm reduced sulfur compounds, expressed as sulfur dioxide, at zero percent oxygen on a dry basis, if the air pollutants are not oxidized before release to the atmosphere.

[18 AAC 50.055(d)(2)(A) & (B)]

Sulfur Compound Emissions Monitoring, Recordkeeping and Reporting

10.6. Monitor, record, and report in accordance with Conditions 12 through 14, Condition 17, and Conditions 35.3 and 35.4 to demonstrate compliance with the applicable standards in Conditions 10.1 through 10.5.

10.7. Report as excess emissions, in accordance with Condition 140, whenever any of the fuel combusted exceeds the applicable sulfur compound limitations in Conditions 10.1 through 10.5. When reporting under this condition, include the calculated SO_2 emissions in ppm using Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]

[5] For purposes of this permit, *gas* is defined as fuel gas (FG) and/or natural gas (NG) and/or LPG. The Permittee has demonstrated that the FG (a combination of refinery gas, NG and LPG) used in the facility does not cause opacity.

Ice Fog Conditions

11. Discontinue water injection in EU IDs 32 and 33 *[GT-1400 and GT-1410]* and notify the Department when the Permittee deems ice fog a traffic hazard. The Permittee is exempt from Condition 38 when ice fog is deemed a traffic hazard or when taking actions to prevent or reduce ice fog.

[Permit to Operate No. 9323-AA008 (amended), Condition 6, 11/18/96]
[18 AAC 50.080]

Source-Specific Requirements

Best Available Control Technology (BACT) Emission Limits for SO_2 Emissions

12. Diesel Fuel Sulfur BACT Limit. The Permittee shall limit the sulfur content of the diesel fuel combusted in EU IDs 34, 35, and 38 through 40 *[EG-704, EG-801, P-708A, P-708B, and P-708C]* to 0.35 percent sulfur by weight[6].

12.1. Monitor and record the fuel sulfur content of the diesel fuel combusted in EU IDs 34, 35 and 38 through 40 *[EG-704, EG-801, P-708A, P-708B, and P-708C]*, by testing a sample of the fuel from each delivery by a method approved in 18 AAC 50.035(c) or by keeping a copy of fuel receipts that specify fuel grade or sulfur content for each fuel delivery.

12.2. Include copies of the records required by Condition 12.1 with the stationary source operating report required by Condition 141 for the period covered by the report.

12.3. Report as excess emissions in accordance with Condition 140, whenever the fuel combusted exceeds the sulfur content limit in Condition 12.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[Construction Permit No. 9923-AC010 Rev.1, Cond. 43.4.4, 43.5.2, & 45.1 - 45.3, and Exhibit B (E.1), 12/31/02]

13. Fuel Gas H_2S BACT Limit (NG, LPG, and RG Combined). The Permittee shall limit the sulfur content of the refinery gas (RG) burned at the stationary source to 162 ppmv H_2S or 230 mg/dscm H_2S.

13.1. Monitor the FG for H_2S as required by Condition 35.3.

13.2. Keep records of the results of H_2S content obtained in Condition 13.1. Calculate and record the monthly average and high FG concentration of sulfur as H_2S ppmv and in mg/dscm.

13.3. Include copies of the records required by Condition 13.2 with the stationary source operating report required by Condition 141 for the period covered by the report.

[6] EU IDs 32 and 33 are diesel fuel-fired units that are subject to a more stringent Owner Requested Limit (ORL) of 0.0225 weight percent sulfur (wt% S) in diesel established under Minor Permit No. AQ0035MSS01 issued 4/23/07 (see Condition 17).

13.4. Report as excess emissions in accordance with Condition 140, whenever the fuel combusted exceeds the sulfur content limit in Condition 13.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[Construction Permit No. 9923-AC010 Rev.1, Cond. 43.4.1, 43.5.2, & 45.1 - 45.3, and Exhibit B (E.1), 12/31/02]

14. NG and LPG Fuel H_2S / Sulfur BACT Limits. The Permittee shall limit the sulfur content of the NG and LPG burned in the stationary source as a stand-alone fuel or as a component of FG to:

14.1. 0.01 percent H_2S by volume for NG; and 0.01 percent sulfur by weight for LPG.

14.2. Monitor the H_2S content of NG and the total sulfur content of LPG according to the frequency specified in Condition 39.1.d(ii), and in accordance with one of the methods specified in Condition 39.1 or 39.2 as appropriate.

14.3. Keep records of the results of H_2S and total sulfur content obtained in Condition 14.2.

14.4. Include copies of the records required by Condition 14.3 with the stationary source operating report required by Condition 141 for the period covered by the report.

14.5. Report as excess emissions in accordance with Condition 140, whenever the fuel combusted exceeds the sulfur content limits in Condition 14.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[Construction Permit No. 9923-AC010 Rev.1, Cond. 43.4.2&3, 43.5.2, & 45.1 - 45.3, and Exhibit B (E.1 & 2), 12/31/02]

BACT Emissions Limits for NO_x Emissions

15. NO_X BACT Limits. The Permittee shall limit NO_X emissions from EU IDs 6 through 9, 11, 20, and 27 through 29 *[H-204, H-205, H-401, H-402, H-404, H-1001, H-1201/1203, H-1202 and H-1701]*, to no more than the limits indicated in Table B.

Table B – NO_X Emissions Limits

EU ID	Emission Unit Name	NO_X Emissions Limit (lb/MMBtu)
6	H-204	0.08
7	H-205	0.08
8	H-401	0.08
9	H-402	0.08
11	H-404	0.08
20	H-1001	0.08
27	H-1201/1203	0.10
28	H-1202	0.10
29	H-1701	0.06

15.1. Maintain and operate low NO_X burner on EU ID 29 *[H-1701]*;

a. Conduct a NO_X and O_2 source test under 40 C.F.R. 60, Appendix A, Method 20, or Method 7E and either Method 3 or 3A on EU IDs 6 through 9, 11, 20, and 27 through 29 *[H-204, H-205, H-401, H-402, H-404, H-1001, H-1201/1203, H-1202 and H-1701]* in accordance with Section 5 within the first applicable criteria below in the noted timeframe below except as set out in Condition 15.1.a(iii):

(i) within 5 years of the latest performance test, except as follows:

(ii) within 1 year of the date of issue of this permit if the last source test occurred greater than four years prior to issuance of this permit, and the 400-hour threshold was triggered within 6 months of the permit issue date, or

(iii) within 1 year after exceeding 400 hours of operation in a 12-month period if, the last source tests occurred greater than 4 years prior to the exceedance.

b. Conduct source tests under Condition 15.1.a at no less than 80% of each unit's rated firing rate, or test at the highest typical operating load of the unit. The source test report shall provide NO_X emissions in lb/MMBtu for each load. For units of the same make, model, and design, one unit within the group can be tested.

[Permit to Operate No. 9323-AA008 (amended), Condition 14a &21 and Exhibit C, 11/18/96]
[Construction Permit No. 9923-AC0101 Rev. 1 Exhibits B(A), C & D(5), 12/31/02]
[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]

BACT Emissions Limits for Benzene, Toluene, Xylene (BTX) Emissions

16. BACT BTX Limit. The Permittee shall limit the BTX emissions from the control device for EU ID 48 *[AS 1320]* to no more 0.94 mg/sec.

[Construction Permit No. 9923-AC010 Rev.1, Exhibit B(G), 12/31/02]

16.1. Operate EU ID 48 *[AS 1320]* as follows:

a. Vent emissions from EU ID 48 *[AS 1320]* to a Thermal Oxidizer for normal operation. Retain the Granular Activated Carbon Control Unit for use during periods when the thermal unit is not in operation.

b. Maintain a minimum set point temperature of 1,500 °F in the thermal oxidation unit. When the temperature is less than the set point, shut down either EU ID 48 *[AS 1320]* or route exhaust gas to the Granular Activated Carbon Unit.

c. Limit airflow through EU ID 48 *[AS 1320]* to 12,500 actual cubic feet per minute.

d. Limit airflow through the thermal oxidation unit to 6,000 actual cubic feet per minute.

16.2. Monitor compliance with Condition 16.1 as follows:

a. Continuously monitor setpoint temperature to meet design and destruction removal efficiency in the combustion chamber of the thermal oxidizer.

b. For periods during which emissions are not controlled by the thermal oxidation unit, weekly analyze BTX mass emissions and concentration at the outlet with gas chromatography as set out in Method 18, 40 C.F.R. 60 or an alternative methodology approved by the Department.

16.3. Report in the operating report under Condition 141, the results of each determination of parameters required in Condition 16.2 as follows:

a. the daily average temperature of the Thermal Oxidizer of EU ID 48 *[AS 1320]* in accordance with Condition 16.2.a;

b. the times when the incinerator temperature falls below the setpoint, and the reason for each incident during which the temperature monitored under Condition 16.2.a is less than 1500 °F;

c. the monthly concentration and monthly mass emission rate of BTX from each operating Carbon Adsorption System of EU ID 48 *[AS 1320]* in accordance with Condition 16.2.b.

16.4. For periods during which EU ID 48 *[AS 1320]* emissions are not controlled by the Thermal Oxidation Unit, the Permittee shall:

a. analyze BTX mass emissions and concentration weekly at outlet with gas chromatography as set out in the sampling plan submitted to the Department dated November 22, 2004; and

b. Report the following in the operating report required under Condition 141:

(i) Air flow during sampling time in scf/min;

(ii) Temperature at sampling site in °F;

(iii) BTX concentration as determined in Condition 16.4.a in ppb; and

(iv) BTX mass emission as determined in Condition 16.4.a in mg/sec.

16.5. Report under Condition 140 should the BTX emissions from EU ID 48 *[AS 1320]* exceed the limit set out in Condition 16 or deviate from any of the parameters set out by Condition 16.1.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[Construction Permit No. 9923-AC010 Rev.1, Conditions 30, 31.3 & 31.4, Exhibits C & D (7)(a), 12/31/02]
[Minor Permit No. AQ0035MSS02, 4/4/08]

Owner Requested Limits to Avoid Classification as PSD and Protect Ambient Air Quality Standards

17. Fuel Sulfur Limit for EU IDs 32 and 33[7]. The Permittee shall limit liquid fuel sulfur content for fuel combusted in EU IDs 32 and 33 *[GT-1400 and GT-1410]* (or EU IDs 32A and 33A *[GT-1400A and GT-1410A]* when replaced) as listed in Table A to less than 0.0225 weight percent sulfur (wt% S) at all times. Monitor, record, and report as follows:

17.1. Analyze a representative sample of any fuel added to the tanks used to supply EU IDs 32 and 33 using ASTM methods D129-00, D1266-98, D1552-95, D2622-98, D4294-98, D4505-99, D5453-00, or an appropriate method listed in 18 AAC 50.035(b)-(c) and 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).

17.2. Except as indicated in Condition 17.3, calculate and record the sulfur content, by weight, of the fuel in the tank, after each time fuel is added to the tank, using Equation 1.

Equation 1 $$S_B = \frac{(Q_A \times S_A) + (Q_{BA} \times S_{BA})}{Q_T}$$

Where:

Q_A	=	Quantity of added fuel, pounds
S_A	=	Sulfur content of added fuel, percent sulfur by weight
Q_{BA}	=	Quantity of fuel in tank before fuel added, pounds
S_{BA}	=	Sulfur content of fuel in tank before fuel added, percent sulfur by weight
S_B	=	Sulfur content of blended fuel in the tank, percent sulfur by weight (will be S_{BA} for subsequent calculation)
Q_T	=	Total quantity of fuel in tank ($Q_A + Q_{BA}$), pounds

17.3. If the fuel sulfur content in the tank (S_{BA}) is less than 0.0225 wt% S and the sulfur content of the fuel to be added is less than 0.0225 wt% S, then the Permittee may forego fuel sulfur content calculations in Condition 17.2 for that fuel addition. If the Permittee foregoes fuel sulfur content calculations for a fuel addition, then for the next fuel addition for which the fuel sulfur content is greater than 0.0225 wt% S, the Permittee shall either:

a. assume the fuel sulfur content of the fuel in the tank is 0.0225 wt% S; or

b. test the fuel sulfur content of the fuel in the tank in accordance with Condition 17.1.

17.4. Keep records of results of each sulfur measurement required under Condition 17.1, and each fuel sulfur calculation conducted under Condition 17.2.

17.5. If the fuel sulfur content combusted in either EU IDs 32 or 33 exceeds 0.0225 wt% S, report as excess emissions as described in Condition 140.

[7] The 438-hour operational limit on diesel fuel each for EU IDs 32 and 33 was rescinded in Minor Permit No. AQ0035MSS01. However, an Owner Requested Limit (ORL) to limit fuel sulfur to 0.0225 weight percent sulfur (wt% S) of diesel burned in EU IDs 32 and 33 was necessary to avoid classification as a PSD significant modification.

17.6. Include the records required under Condition 17.4 with the operating report described in Condition 141.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[Minor Permit No. AQ0035MSS01, 4/23/07]

18. NO_X Limits and Combustion Operations for EU IDs 2 and 10. The Permittee shall limit NO_X emissions from EU IDs 2 and 10 *[H-101B and H-403N]* to no more than the limits indicated in Table C.

Table C – NO_X Emissions Limits

EU ID	Emission Unit Name	NO_X Emissions Limit (lb/MMBtu)
2	H-101B	0.06
10	H-403N	0.06

18.1. Maintain and operate low NO_X burners on the crude heater *[H-101B]* and the Hydrocracker heater *[H-403N]*, EU IDs 2 and 10, respectively;

a. Conduct NO_X emission source tests on EU IDs 2 and 10 *[H-101B and H-403N]* in accordance with Section 5 within the first applicable criteria below in the noted timeframe once during the life of this permit

(i) within 5 years of the latest performance test, or

(ii) within 1 year of the date of issue of this permit if the last source test occurred greater than four years prior to issuance of this permit, or

(iii) within 1 year after exceeding 400 hours of operation in a 12-month period if, the last source tests occurred greater than four years prior to the exceedance; and

b. Conduct source tests under Condition 18.1.a at no less than 80% of each unit's rated firing rate, or test at the highest typical operating load of the unit. The source test report shall provide NO_X emissions in lb/MMBtu for each load. For units of the same make, model, and design, one unit within the group can be tested.

18.2. The Permittee shall report as follows:

a. Report under Condition 134, the results of the source tests required in Condition 18.1.a

b. Report as excess emissions in accordance with Condition 140, if NO_X emissions or O_2 concentration exceeds the limits in Conditions 18 and 20.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[Construction Permit No. 9923-AC010 Rev.1, Conditions 18, 25, 26, 32.1 & 34.1, 12/31/02]

19. Soil Vapor Extraction Operations. The Permittee shall not cause or allow total combined volatile organic compounds (VOC) emissions to exceed 16.2 tons and total combined hazardous air pollutants (HAP) emissions to exceed 2.5 tons from EU IDs 44 and 45 *[E77 SVE and LTF SVE]* per consecutive 12-month period. Operate EU IDs 44 and 45 *[E77 SVE and LTF SVE]* as follows:

19.1. Route all Soil Vapor Extraction emissions from EU IDs 44 and 45 *[E77 SVE and LTF SVE]* through a Granular Activated Carbon Control Unit at all times the EUs are in operation. Maintain the carbon adsorption system according to the manufacturer's operation and maintenance procedures at all times. No direct atmospheric venting is authorized.

19.2. Limit airflow through EU ID 44 *[E77 SVE]* to within 10% of 100 standard cubic feet per minute.

19.3. Limit airflow through EU ID 45 *[LTF SVE]* to within 10% of 400 standard cubic feet per minute.

Monitor, record, and report as follows:

19.4. Record the time and date that each of EU IDs 44 and 45 *[E77 SVE and LTF SVE]*, starts and stops operation.

19.5. For periods during which EU IDs 44 and 45 *[E77 SVE and LTF SVE]* are in operation, at a consistent time each week (take measurements at a minimum of 4 days apart and a maximum of 9 days apart), analyze VOC and HAP mass emissions and concentration at the outlet of the activated carbon units with gas chromatography as set out in EPA Method TO-15.[8]

For each weekly analysis, record the following:

a. Air flow during sampling time in scf/min;

b. VOC and HAP concentration in ppb; and

c. VOC and HAP mass emission in mg/sec.

19.6. Calculate and record, by the end of each calendar month, for EUs 44 and 45 *[E77 SVE and LTF SVE]*:

a. the total VOC and HAP emissions from EU IDs 44 and 45 *[E77 SVE and LTF SVE]* (in tons), for the previous calendar month, using the records required by Condition 19.5; and

b. the total VOC and HAP emissions from EU IDs 44 and 45 *[E77 SVE and LTF SVE],* for the previous 12 consecutive month period.

19.7. Submit to the Department under the operating report in Condition 141:

a. the records required in Condition 19.4 for the reporting period; and

b. the records required by Condition 19.6 for the reporting period, and calculations sufficient for an inspector to verify the totals.

[8] Total HAP will be calculated assuming that pollutants that are reported as non-detect values on the sample analyses are "0" and will not contribute to the total.

19.8. Report under Condition 140 if:

a. the 12 consecutive month total VOC or HAP emissions from EU IDs 44 and 45 *[E77 SVE and LTF SVE]* exceed the limits set out in Condition 19; or

b. EU IDs 44 and 45 *[E77 SVE and LTF SVE]* deviate from the operational requirements set out in Conditions 19.1 through 19.7.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[Minor Permit No. AQ0035MSS04, Condition 2, 4/29/16]

20. Operational Limits. The Permittee shall limit operation of EU IDs 6 through 11, and 34 through 41 *[H-204, H-205, H-401, H-402, H-403N, H-404, EG-704, EG-801, P-605A, P-605B, P-708A, P-708B, P-708C, and P-719C]* as indicated in Table D.

Table D – Operational Limits

EU ID	EU Name	Type of Fuel	Operating Limit
6 & 7	H 204 and H 205	FG/NG/LPG	Not to exceed 7% O_2 as measured in exhaust gas by CEMS
8	H-401	FG/NG/LPG	Not to exceed 7.7% O_2 as measured wet in exhaust gas by CEMS
9	H-402	FG/NG/LPG	Not to exceed 9.0% O_2 as measured wet in exhaust gas by CEMS
10 & 11	H 403N and H 404	FG/NG/LPG	Not to exceed 6% O_2 as measured in exhaust gas by CEMS
34 & 35	EG 704 and EG 801	Diesel	200 hours per 12-month period, each unit
36 & 37	P 605A and P 605B	NG	2,500 hours per 12-month period, combined for both units
38 & 39	P 708A and P 708B	Diesel	600 hours per 12-month period, each unit. EU ID 38 is prohibited from operating when EU ID 39 is in operation unless in situations of fire.
40	P 708C	Diesel	600 hours per 12-month period
41	P 719C	NG	1,000 hours per 12-month period

20.1. To ensure compliance with this condition:

a. Monitor the engine run time and record the engine run time and date that each of EU IDs 38 and 39 *[P 708A and P 708B]* starts and stops operation (see Condition 104.1 for hourly limits to remain classification as emergency).

b. Monitor and record the monthly hours of operation and total hours of operation per 12-month rolling period for each of EU IDs 34 through 41 *[EG-704, EG-801, P-605A, P-605B, P-708A, P-708B, P-708C, and P-719C]*.

c. Operate EU IDs 6 through 11 with an O_2 CEMS in accordance with Condition 20.2.a.

20.2. To ensure compliance with the short-term emission limits; comply with the limits of Table D.

a. Maintain, calibrate and operate a CEMS to monitor the oxygen percent (O_2 %) in the exhaust gas from EU IDs, 6 through 11 *[H-204, H-205, H-401, H-402, H-404, and H-403N]* as follows:

(i) Do not cause or allow three-hour rolling averages of O_2% content in the exhaust gas to exceed the limits indicated in Table D; and

(ii) Demonstrate continuous monitoring system accuracy in accordance with 40 C.F.R. 60, Appendix B, Performance Specification 3 or approved alternative method;

(iii) Demonstrate adherence to appropriate Quality Assurance procedures in the operation and result reporting for the O2 CEMS.

20.3. The Permittee shall report as follows:

a. Report in the operating report of Condition 141, the monthly average concentration of O_2 (calculated by summing the average daily concentration and then dividing by the number of days in the months) and the monthly maximum three-hour rolling average value of O_2 to the nearest percent for EU IDs 6 through 11 *[H-204, H-205, H-401, H-402, H-403N, and H-404]*;

b. Report under Condition 134, the results of the source tests required in Condition 15.1.a; and

c. Report as excess emissions in accordance with Condition 140, if NO_X emissions or O_2 concentration exceeds the limits in Conditions 15 and 20.2.a(i).

20.4. Report the data recorded under Conditions 20.1.a and 20.1.b with the operating report under Condition 141.

20.5. Report under Condition 140 any exceedance or deviations from the operating limits in Table D.

[18 AAC 50.040(j) & 50.326(j) and 40 C.F.R. 71.6(a)(3) & (c)(6)]
[Permit to Operate No. 9323-AA008 (amended), Condition 14a & 21 and Exhibit C, 11/18/96]
[Construction Permit No. 9923-AC010 Rev.1, Conditions 28.2, 29 & 31.2, and Exhibit B(A), C, & D(1) 12/31/02]
[Construction Permit No. 035CP04, Condition 2, 9/7/04]
[Minor Permit No. AQ0035MSS01, 4/23/07]
[Minor Permit No. AQ0035MSS05, DATE]

21. Tank Maintenance Activities. For each calendar year, record and report tank maintenance activities as follows.

21.1. Record the Tank ID for each tank cleaned or coated, and, for each *tank maintenance emissions unit*[9] used, the

[9] For purposes of this permit *tank maintenance emission unit* refers to an emission unit (i.e. boiler, heater, non road engine, thermal oxidation control) brought on site for use in routine tank maintenance operations: fluidization, tank coating, sludge processing. *Tank maintenance emission units* do not include emissions units listed in Emission Unit Inventory tables of Title V Operating Permit Nos. AQ0035TVP02, AQ033TVP02, and AQ0036TVP02, or insignificant sources as defined under 18 AAC 50.326(e) – (i).

a. make;

b. model;

c. rated capacity;

d. emission rate factor for NO_2, SO_2, and PM-10;

e. basis for each emission factor;

f. date(s) used;

g. hours operated; and

h. fuel type.

21.2. Calculate and record the maximum hourly emission rates of SO_2 and PM-10 that occurred during the calendar year due to tank maintenance activities, in pounds per hour, for all *tank maintenance emission units*, using the units' rated capacity and assuming worst case simultaneous operation.

21.3. Calculate and record annual emissions of NO_2, SO_2, and PM-10 that occurred during the calendar year due to tank maintenance activities, in tons per year (TPY), for all *tank maintenance emission units*, using the units' rated capacity.

21.4. Include the records required under Conditions 21.1, 21.2, and 21.3 with the operating report required in Condition 141. Include in the report, a comparison of the actual long term, in TPY, and actual maximum short term in lb/hr, emission rates to the following emission rates

Table E – Modeled Tank Cleaning Emission Rates

	NO_2	**SO_2**	**PM-10**
Short Term (lb/hr)	N/A	1.00	1.58
Long Term (TPY)	31.23	0.69	2.17

21.5. Furnish to the Department, at the Department's written request, a revised ambient impact assessment if the emission from the *tank maintenance emission units* exceed the emission rates in Table E.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[Construction Permit No. 035CP04, Condition 3, 9/7/04]

22. Stack Height. The Permittee shall maintain the stack height of Unit 34 *[EG-704]* to no less than seven meters above grade, and shall notify the Department in advance of any changes in stack height for EU ID 34 *[EG 704]* and shall submit modified stack as-built drawings of the existing and modified stack with the next operating report for the reporting period in which the stack height change was completed.

[Construction Permit 035CP04, Condition 4, 9/7/04]
18 AAC 50.040(j) & 50.326(j)(4)]

23. Quality Assurance Plan. The Permittee shall maintain and comply with the approved Quality Assurance Plan developed to address the process monitoring requirements

described in Conditions 13, 15, 16, 19, 35.3, 38.1, and 106.2. Keep a copy of the plan at the stationary source.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[Permit to Operate No. 9323-AA008 (amended), Condition 22 and Exhibit C, 11/18/96]

Insignificant Emission Units

24. For EU IDs 34, 35[10] and 38 through 40 *[P-708A, P-708B, P-708C, EG-704 and EG-801]* listed in Table A and for emission units at the stationary source that are insignificant as defined in 18 AAC 50.326(d)-(i) that are not listed in this permit, the following apply:

24.1. **Opacity Standard**. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.050(a) & 50.055(a)(1)]

24.2. **PM Standard**. The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1)]

24.3. **Sulfur Standard**. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c)]

24.4. **General MR&R for Insignificant Emission Units**

a. The Permittee shall submit the compliance certifications of Condition 142 based on reasonable inquiry for Condition 24;

b. The Permittee shall comply with the requirements of Condition 119;

c. The Permittee shall report in the operating report required by Condition 141 if an emission unit is insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and actual emissions become greater than any of those thresholds; and

d. No other monitoring, recordkeeping or reporting is required, except as indicated otherwise within the permit.

[18 AAC 50.346(b)(4)]

[10] EU IDs 34, 35, and 38 - 40 do not qualify as insignificant units per 18 AAC 50.326(d)(1) because of operational limits established under a Title I permit, but have actual emissions below the significant emissions thresholds in 18 AAC 50.326(e). The Department referenced the general requirements for insignificant emission units to satisfy the State VE and PM MR&R requirements for these units.

Section 4. Federal Requirements

Emission Units Subject to Federal NSPS, Subpart A

25. NSPS Subpart A Notification. Unless otherwise specified in an applicable subpart, for any affected facility[11] regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Department and EPA written or electronic notification of:

[18 AAC 50.035 & 50.040(a)(1)]
[40 C.F.R. 60.7(a) & 60.15(d), Subpart A]

25.1. the date that construction or reconstruction of an affected facility commences postmarked no later than 30 days after such date;

[40 C.F.R. 60.7(a)(1), Subpart A]

25.2. the actual date of initial startup of an affected facility postmarked within 15 days after such date;

[40 C.F.R. 60.7(a)(3), Subpart A]

25.3. any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies unless that change is specifically exempted under an applicable subpart or in 40 C.F.R. 60.14(e), postmarked 60 days or as soon as practicable before the change is commenced and shall include:

a. information describing the precise nature of the change,

b. present and proposed emission control systems,

c. productive capacity of the facility before and after the change, and

d. the expected completion date of the change;

[40 C.F.R. 60.7(a)(4), Subpart A]

25.4. the date of a continuous monitoring system performance demonstration, postmarked not less than 30 days prior to such date;

[40 C.F.R. 60.7(a)(5), Subpart A]

25.5. the anticipated date for conducting the opacity observations required by 40 C.F.R. 60.11(e)(1), including, if appropriate, a request for the Department to provide a visible emissions reader during a performance test, postmarked not less than 30 days prior to such date;

[40 C.F.R. 60.7(a)(6), Subpart A]

25.6. that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required in lieu of Method 9 observation data as allowed by 40 C.F.R. 60.11(e)(5), postmarked not less than 30 days prior to the date of the performance test; and

[40 C.F.R. 60.7(a)(7), Subpart A]

[11] Affected facility means, with reference to a stationary source, any apparatus to which a standard applies, as defined in 40 C.F.R. 60.2, effective 10/08/09.

25.7. any proposed replacement of an existing facility, for which the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, postmarked as soon as practicable, but no less than 60 days before commencement of replacement, and including the following information:

[40 C.F.R. 60.15(d)]

a. the name and address of owner or operator,

b. the location of the existing facility,

c. a brief description of the existing facility and the components that are to be replaced,

d. a description of the existing and proposed air pollution control equipment,

e. an estimate of the fixed capital cost of the replacements, and of constructing a comparable entirely new facility,

f. the estimated life of the existing facility after the replacements, and

g. a discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.

26. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements. The Permittee shall maintain records of the occurrence and duration of:

26.1. any start-up, shutdown, or malfunction in the operation of EU IDs 2 through 11, 17 through 20, 25, 27 through 29, 32, 33, 32A, 33A, 42, 59 through 60, 77, 79 through 82, 92, 93, 101, 105 through 109, 115, 116, 118, 119, 120, and 122 through 125 *[H-101B, H-201, H-202, H-203, H-204, H-205, H-401, H-402, H-403N, H-404, H-704, H-801, H-802, H-1001, H-1105, H-1201/1203, H-1202, H-1701, GT-1400, GT-1410, GT-1400A, GT-1410A, J-801, TK-13, TK-14, TK-42, TK-51, TK-55, TK-57, TK-59, TK-67, TK-94, TK-95, SRU, TK-04A, TK-04B, TK-04C, TK-96, VU Drains, H-1601, H-1602, DDU Drains, H-1801, TK- 67, TK-723 Bypass Tanks, TK-723, TK-724, and CPI]*, and

26.2. any malfunctions of associated air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU IDs 2 through 11, 17 through 20, 25, 27 through 29, 32, 33, 42, 115, 116 and 119 *[H-101B, H-201, H-202, H-203, H-204, H-205, H-401, H-402, H-403N, H-404, H-704, H-801, H-802, H-1001, H-1105, H-1201/1203, H-1202, H-1701, GT-1400, GT-1410, J-801, SRU, H-1601, H-1602, and H-1801]* is inoperative.

[18 AAC 50.040(a)(1)]
[40 C.F.R. 60.7(b), Subpart A]

27. NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report. For EU IDs 2 through 11, 17 through 20, 25, 27 through 29, 32, 33, 32A, 33A, 42, 115, 116 and 119 *[H-101B, H-201, H-202, H-203, H-204, H-205, H-401, H-402, H-403N, H-404, H-704, H-801, H-802, H-1001, , H-1105, , H-1201/1203, H-1202, H-1701, GT-1400, GT-1410, GT-1400A, GT-1410A, J-801, H-1601, H-1602, and H-1801]*, the Permittee shall submit to the Department and to EPA a written "excess emissions and monitoring systems performance report " (EEMSP)[12] any time a limit in Conditions 35.1, 35.2, 36 and 38.1 has been exceeded as described in this condition. Submit the EEMSP reports with the summary report form as required in Condition 28. Written reports of excess emissions shall include the following information:

[18 AAC 50.040(a)(1)]
[40 C.F.R. 60.7(c), Subpart A]

27.1. The magnitude of excess emissions computed in accordance with Condition 33.4, any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.

[40 C.F.R. 60.7(c)(1), Subpart A]

27.2. Identification of each period of excess emissions that occurred during startup, shutdown, and malfunction of EU IDs identified in Condition 27, the nature and cause of any malfunction, and the corrective action taken or preventative measures adopted.

[40 C.F.R. 60.7(c)(2), Subpart A]

27.3. The date and time identifying each period during which a Continuous Monitoring System (CMS) was inoperative except for zero and span checks and the nature of any repairs or adjustments.

[40 C.F.R. 60.7(c)(3), Subpart A]

27.4. In the event that no excess emissions have occurred or in the event that the CMS have not been inoperative, repaired, or adjusted, state such information in the report.

[40 C.F.R. 60.7(c)(4), Subpart A]

28. NSPS Subpart A Summary Report Form. The Permittee shall submit to the Department and to EPA one "summary report form" in the format shown in Figure 1 of 40 C.F.R. 60.7 (see Attachment A) for each pollutant monitored for EU IDs identified in Condition 27. The report shall be submitted semiannually, postmarked by the 30th day following the end of each 6-month period, except when more frequent reporting is specifically required by an applicable subpart, case-by-case basis, or the EPA, as follows:

[18 AAC 50.040(a)(1)]
[40 C.F.R. 60.7(c) & (d), Subpart A]

[12] The federal EEMSP report is not the same as the State excess emission report required by Condition 140.

28.1. If the total duration of excess emissions for the reporting period is less than one percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than five percent of the total operating time for the reporting period, submit a summary report form unless the EEMSP report described in Condition 27 is requested, or

[40 C.F.R. 60.7(d)(1), Subpart A]

28.2. If the total duration of excess emissions for the reporting period is one percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is five percent or greater of the total time for the reporting period, then submit a summary report form and the EEMSP described in Condition 27.

[40 C.F.R. 60.7(d)(2), Subpart A]

29. NSPS Subpart A Performance (Source) Tests. The Permittee shall conduct initial source tests according to 40 C.F.R. 60.8 and Section 5 on any affected facility at such times as may be required by EPA, and shall provide the Department and EPA with a written report of the results of the source test.

[18 AAC 50.040(a)(1)]
[40 C.F.R. 60.8(a), Subpart A]

30. NSPS Subpart A Good Air Pollution Control Practice. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU IDs 2 through 11, 17 through 20, 25, 27 through 29, 32, 33, 42, 59 through 60, 77, 79 through 82, 92, 93, 99, 101 through 109, 115 through 118, 119, 120, and 122 through 125 *[H-101B, H-201, H-202, H-203, H-204, H-205, H-401, H-402, H-403N, H-404, H-704, H-801, H-802, H-1001, H-1105, H-1201/1203, H-1202, H-1701, GT-1400, GT-1410, J-801, TK-13, TK-14, TK-42, TK-51, TK-55, TK-57, TK-59, TK-94, TK-95, Hydrocracker, SRU, PRIP Unit, DIB Unit, Vacuum Unit, TK-04A, TK-04B, TK-04C, TK-96, VU Drains, , H-1601, H-1602, DDU, DDU Drains, H-1801, TK-67, TK-723 Bypass Tanks, TK-723, TK-724, and CPI]* including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of these emission units.

[18 AAC 50.040(a)(1)]
[40 C.F.R. 60.11(d), Subpart A]

31. NSPS Subpart A Credible Evidence. For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 35 and 38 through 60 nothing in 40 C.F.R. Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 2 through 11, 17 through 20, 25, 27 through 29, 32, 33, 32A, 33A, 42, 59 through 60, 77, 79 through 82, 92, 93, 99, 101 through 109, 115 through 118, 119, 120, and 122 through 125 *[H-101B, H-201, H-202, H-203, H-204, H-205, H-401, H-402, H-403N, H-404, H-704, H-801, H-802, H-1001, H-1105, H-1201/1203, H-1202, H-1701,GT-1400, GT-1410,GT-1400A, GT-1410A, J-801, TK-13, TK-14, TK-42, TK-51, TK-55, TK-57, TK-59, TK-94, TK-95, Hydrocracker, SRU, PRIP Unit, DIB Unit, Vacuum Unit, TK-04A, TK-04B, TK-04C, TK-96, VU Drains, H-1601, H-1602, DDU, DDU Drains, H-1801, TK-67, TK-723 Bypass Tanks, TK-723, TK-724, and CPI]*

would have been in compliance with applicable requirements of 40 C.F.R. Part 60 if the appropriate performance or compliance test or procedure had been performed.

[18 AAC 50.040(a)(1)]
[40 C.F.R. 60.11(g), Subpart A]

32. NSPS Subpart A Concealment of Emissions. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Conditions 35 and 38 through 60. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.

33. NSPS Subpart A, Monitoring. For a Continuous Monitoring System (CMS) required under Conditions 35.3.a and 35.3.b, the Permittee shall:

[18 AAC 50.040(a)(1)]
[40 C.F.R. 60.13(a) Subpart A]

33.1. Install and operate the CMS prior to a performance test conducted under Condition 29, including completion of manufacturer's written requirements or recommendations for installation, operation, and calibration of device.

[40 C.F.R. 60.13(b), Subpart A]

33.2. Check the zero (or low level value between zero and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with 40 C.F.R. 60.13(d).

[40 C.F.R. 60.13(d)(1), Subpart A]

33.3. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under Condition 33.2, keep all CMS in operation continuously and as follows:

[40 C.F.R. 60.13(e), Subpart A]

a. Complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

[40 C.F.R. 60.13(e)(2), Subpart A]

33.4. Reduce data in accordance with:

[40 C.F.R. 60.13(h), Subpart A]

a. 1-hour averages shall be computed as provided in §60.13(h)(2), except that the provisions pertaining to the validation of partial operating hours are only applicable for affected facilities that are required by the applicable subpart to include partial hours in the emission calculations.

b. Do not include data recorded during periods of CMS breakdowns, repairs, calibration checks, and zero and span adjustments in the data averages computed under this condition.

c. Convert all excess emission into units of the standard used in Condition 35 after conversion the Permittee may round data to the same number of significant digits as used in the condition.

d. The Permittee may use an arithmetic or integrator average of all data, and record data in reduced or non-reduced form (e.g., ppm pollutant percent O_2 or ng/J of pollutant).

34. NSPS Subpart A Subpart A General Control Device Requirements[13]. The Permittee shall monitor EU ID 42 *[J-801]*, a flare used as control device for the Refinery, to ensure that it is operated and maintained in conformance with 40 C.F.R. 60.18(c)(1), (c)(2), (c)(3)(ii), (c)(5), (c)(6), 60.18(d), 60.18(e), 60.18(f)(1), (f)(2), (f)(3), (f)(4), (f)(6), and 40 C.F.R. 60.485(g).

34.1. EU ID 42 *[J-801]* shall be:

a. designed for and operated with no visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours; and

b. operated with a flame present at all times when emissions may be vented to them.

[40 C.F.R. 60.18(c)(1 & 2) & 60.18(e), Subpart A]

34.2. The Permittee shall monitor EU ID 42 *[J-801]* to ensure that it is operated and maintained in conformance with its design, and according to the provisions of 40 C.F.R. 60.485(g), Subpart VV (Condition 55).

[40 C.F.R. 60.18(f)(d), Subpart A]

a. Use Method 22 of 40 C.F.R. 60 Appendix A to determine the compliance of flares with the visible emission provisions in Condition 34.1.a. The observation period is 2 hours and shall be taken monthly using Method 22.

[40 C.F.R. 60.18(f)(1), Subpart A
40 C.F.R. 71.6(a)(3)]

b. To ensure compliance with Condition 34.1.b, install and monitor the presence of a flare pilot flame using a thermocouple, infrared or any other equivalent device to detect the presence of a flame. The time, date, and duration of any loss of pilot flame shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated at a frequency in accordance with, the manufacturer's specifications.

[40 C.F.R. 60.18(f)(2), Subpart A]

c. For EU ID 42 *[J-801]*, an air-assisted flare, the Permittee shall comply with the following:

[40 C.F.R. 60.18(f)(3)-(6), Subpart A]

(i) Operate with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater. The net heating value of the gas being combusted shall be determined by the methods specified in 40 C.F.R. 60.18(f)(3).

[13] The refinery flare, EU ID 42, is subject to 40 C.F.R. 60.18 because it is a control device required in 40 C.F. R. 60.482-10(d) Subpart VV to ensure compliance with the provisions of NSPS Subpart GGG (Condition 55) for EU IDs 99, 102, 103, 104, and 117.

(ii) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, Vmax, as determined by the method specified in 40 C.F.R. 60.18(f)(6). The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(iii) Install a continuous flow monitor that provides a record of the vent stream flow. The flow monitor sensor shall be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured and analyzed. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow shall be recorded each hour. The flow meter shall be calibrated every two years to meet the following accuracy specifications: the flow monitor shall be ±5.0%, temperature monitor shall be ±2.0% at absolute temperature, and pressure monitor shall be ±5.0 mm Hg.

(iv) The flow meter shall operate at least 95% of the time when the flare is operational, averaged over a rolling 12 month period. Actual exit velocity determined in accordance with 40 C.F.R. 60.18(f)(4) shall be recorded at least once every 15 minutes.

(v) Comply with Conditions 34.2c(vi) and 34.2c(vi)(vi)(A) through (vi)(C) no later than April 15, 2014.

(vi) Install and operate a continuous composition analyzer or calorimeter that provides a record of the organic compound emissions or BTU content of the flare gas. The analyzer sample points shall be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured and analyzed. Readings shall be taken at least once every 15 minutes and the average hourly values shall be recorded each hour.

(A) If the Permittee elects to use gas chromatography to measure the gas composition, the calibration of the analyzer shall follow the procedures and requirements of Section 10.0 found in 40 C.F.R. Part 60, Appendix B, Performance Specification 9, except that the multi-point calibration procedure in Section 10.1 of Performance Specification 9 shall be performed at least once every calendar quarter instead of once every month, and the mid-level calibration check procedure in Section 10.2 of Performance Specification 9 shall be performed at least once every calendar week instead of once every 24 hours. The calibration gases used for calibration procedures shall be in accordance with Section 7.1 of Performance Specification 9. Net heating value of the gas combusted in the flare shall be calculated according to the equation given in 40 C.F.R. 60.18(f)(3).

(B) If a calorimeter is used, the calorimeter shall be calibrated, installed, operated, and maintained, in accordance with manufacturer recommendations, to continuously measure and record the net heating value of the gas sent to the flare, in British thermal units/standard cubic foot of the gas.

(C) The continuous analyzer shall operate at least 95% of the time when the flare is operational, averaged over a rolling 12 month period. Flared gas net heating value shall be recorded at least once every 15 minutes unless a calorimeter is used.

(vii) Prior to installation of a continuous composition analyzer or calorimeter, monitor compliance with Condition 34.2.c(i)as follows:

(A) Weekly analyze flare gas composition using gas chromatography or a calorimeter.

(B) Calculate and record the net heating value for each weekly flare gas sample.

[18 AAC 50.040(a)(1), 50.040(a)(2)(Z), 50.040(a)(2)(BB)]
[40 C.F.R. 60.18(b) – (f), Subpart A]
[40 C.F.R. 60.592(d), Subpart GGG; 40 C.F.R. 60.485(g), Subpart VV]

Petroleum Refineries Subject to NSPS Subpart J

35. NSPS Subpart J SO_2 Emission Standards. The Permittee shall not cause or allow:

35.1. Fuel gas burned in EU IDs 2 through 11, 17 through 20, 27 through 29, 42, 115, and 116 [H-101B, H-201, H-202, H-203, H-204, H-205, H-401, H-402, H-403N, H-404, H-704, H-801, H-802, H-1001, H-1201/1203, H-1202, H-1701, H-1601, H-1602,] to contain hydrogen sulfide (H_2S) in excess of 230 milligrams per dscm (0.10 gr/dscf) averaged over three hours; and

35.2. For exhaust gases from EU ID 25 *[H-1105]* located in EU ID 101 *[SRU]*, an oxidation control system or a reduction control system followed by incineration, to exceed sulfur dioxide (SO_2) emissions of 250 ppm by volume (dry basis) at zero percent excess air.

[18 AAC 50.040(a)(2)(J)]
[40 C.F.R. 60.104(a)(1) & (a)(2)(i), Subpart J]

35.3. **Monitoring and Recordkeeping.** The Permittee shall monitor compliance with the standard in Condition 35, as follows:

a. Install, calibrate, maintain and operate instruments for continuous monitoring and recording of the concentration (dry basis) of H_2S in fuel gases before being burned in EU IDs identified in Condition 35.1.

(i) The span value for the fuel gas CEMS is 425 mg/dscm H_2S.

(ii) The performance evaluations for H_2S monitors under 60.13(c) shall use Performance Specification 7. Method 11, 15, 15A or 16 shall be used for conducting the relative accuracy evaluations.

[40 C.F.R. 60.105(a)(4), Subpart J]

b. Install, calibrate, maintain and operate an instrument for continuous monitoring and recording of the concentration (dry basis) of SO_2 emissions into the atmosphere from EU ID 101 *[SRU]*. The monitor shall include an oxygen monitor for correcting the data for excess air.

(i) The span values for this monitor are 500 ppm SO_2 and 25 percent O_2 respectively.

(ii) The performance evaluations for this SO_2 monitor under 40 C.F.R. 60.13(c) shall use Performance Specification 2. EPA Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations.

[40 C.F.R. 60.105(a)(5), Subpart J]

c. Determine compliance with the H_2S and SO_2 standards in Condition 35 in accordance with 40 C.F.R. 60.106(e)(1) and 60.106(f)(1), respectively by using Condition 35.3.a.

[Permit to Operate No. 9323 AA008 (amended), Condition 19 & 21 and Exhibit C, 11/18/96]
[40 C.F.R. 60.13 (c), Subpart A; 40 C.F.R. 60.105(a)(4), & 60.106(e)(1) & (f)(1), Subpart J]

35.4. **Reporting.** The Permittee shall report as follows:

a. For the purpose of EEMSP Reports and Summary Reports required under Conditions 27 and 28, the Permittee shall report as follows:

(i) For EU IDs identified in Condition 35.1, report all rolling 3-hour periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring systems under Condition 35.3 exceeds the limit in Condition 35.1; and

[40 C.F.R. 60.105(e)(3)(ii), Subpart J]

(ii) For EU ID 25 *[H-1105]* located in EU ID 101 *[SRU]*, report all 12-hour periods during which the average concentration of SO_2 as measured by the SO_2 continuous monitoring system (and corrected to zero percent excess air) under Condition 35.3.b exceeds the limit in Condition 35.2.

[40 C.F.R. 60.105(e)(4), Subpart J]

(iii) For any periods for which sulfur dioxide or H_2S emissions data are not available, submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data

unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

[40 C.F.R. 60.107(d), Subpart J]

(iv) Submit the reports required under Condition 35.4 to the EPA semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period.

[40 C.F.R. 60.107(f), Subpart J]

(v) Submit a signed statement certifying the accuracy and completeness of the information contained in the report required in Condition 35.4.

[40 C.F.R. 60.107(g), Subpart J]

35.5. **Alternative Monitoring Plan for EU IDs 1, 2, and 29.** When burning LPG, butane and/or propane in EU IDs 1, 2, and 29 *[H-101A, H-101B, and H-1701]*, the Permittee shall not allow these fuels to contain H_2S in excess of 25 mg/dscm.

a. Monitor the H_2S content of LPG, butane or propane combusted in EU IDs 1, 2, and 29 *[H-101A, H-101B, and H-1701]* on a monthly basis.

b. Determine compliance with Condition 35.5 using the test methods outlined in 40 C.F.R. 60.106(e)(1) or Condition 39.2.b.

c. Maintain and keep records for five years of the following:

(i) the H_2S concentration as determined by Conditions 35.5.a and 35.5.b; and

(ii) each day on which LPG, butane, and/or propane is combusted in EU IDs 1, 2 and 29 *[H-101A, H-101B, and H-1701]*.

d. Submit to EPA an annual report of the records required in Condition 35.5.c, postmarked by the 30th day following the end of the calendar year.

[18 AAC 50.040(a)(1) &(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[40 C.F.R. 60.13(i), Subpart A]
[USEPA Region X Alternative Monitoring Plan, 2/21/97]

Petroleum Refineries Subject to NSPS Subpart Ja

36. This subpart applies to fuel gas combustion devices (EU 119 *[H-1801]*)), and flares (EU 42 *[J-801 flare]*).

FUEL GAS COMBUSTION DEVICES (EU119 [H-1801])

36.1. Emissions Limitations.

a. The Permittee shall not allow fuel gas burned in EU ID 119 [H-1801] to contain hydrogen sulfide (H_2S) in excess of:

(i) 162 ppmv determined on a 3-hour rolling average basis; and

(ii) 60 ppmv determined on a 365 successive calendar day rolling average basis.

(iii) Temporary Fuel Gas Combustion Devices.

(A) The Permittee is not subject to the 365 successive calendar day rolling standard of Condition 36.1.a(ii) if the emission unit is not a fuel gas combustion device for the requisite 365 successive calendar day averaging period.

(B) In the event that fuel gas combustion exceeds 365 days, or fuel gas combustionceases within 365 days from initial fuel gas firing, and at a later date recommences, the 60 ppmv 365 successive calendar day standard becomes applicable and all periods of fuel gas combustion will be included in the averaging period to determine compliance with the long term standard. Periods of intermittent natural gas combustion will be treated as null values during the averaging period for compliance demonstration purposes.

(C) The Permittee is not subject to the fuel gas H_2S standards of Condition 36.1 during periods in which only natural gas is combusted as the fuel source.

b. The Permittee shall not discharge to the atmosphere from EU ID 119 [H-1801] any emissions of NOx in excess of:

(i) For each natural draft process heater:

(A) 40 ppmv (dry basis, corrected to 0-percent excess air) determined on a 30-day rolling average basis; or

(B) 0.040 pounds per million British thermal units (lb/MMBtu) higher heating value basis determined daily on a 30-day rolling average basis.

(ii) Temporary Fuel Gas Combustion Devices

(A) In the event that fuel gas combustion exceeds 30 days, or fuel gas combustion ceases within 30-days of initial fuel gas firing and at a later date recommences, the NOx (or O_2 where applicable) 30-day rolling average standard becomes applicable and all periods of fuel gas combustion will be included in the averaging period to determine compliance with the standard. Periods of intermittent natural gas combustion will be treated as null values during the averaging period for compliance demonstration purposes.

(B) The Permittee is not subject to the NOx (or O_2 where applicable) standard during periods in which only natural gas is combusted as the fuel source.

[40 CFR 60.102a(g)(1)(ii) and 40 CFR 60. 102a (g)(2)(i)(A), Subpart Ja]

36.2. **Fuel Gas Combustion Device Monitoring**

a. The Permittee shall monitor compliance with the H_2S standards in Condition 36.1.a as follows:

(i) Install, calibrate, maintain and operate instruments for continuous monitoring and recording of the concentration (dry bas is) of H_2S in fuel gases before being burned in EU ID 119.

(A) The span value for the fuel gas CEMS is 300 ppm H_2S.

(B) The performance evaluations for H_2S monitors under § 60.13(c) shall use Performance Specification 7. Methods 11, 15A, or 16 shall be used for conducting the relative accuracy evaluations.

(C) The owner or operator shall comply with the applicable quality assurance procedures in appendix F to part 60 for each H_2S monitor.

(D) Fuel gas combustion devices or flares having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H_2S in the fuel gas being burned in the respective fuel gas combustion devices or flares.

[40 CFR 60.107a(a)(2)(i)-(2)(iv), Subpart Ja]

b. The Permittee shall monitor compliance with the NOx standards in Condition 36.1.b as follows:

(i) The Permittee is electing to use an O_2 monitor along with biennial testing as the compliance demonstration for the NOx concentration standard in Condition 36.1.b as described in 40 CFR 60.107a(c)(6). The Permittee shall do the following:

(A) Conduct biennial performance tests according to the requirements in § 60. l04a(i).

(B) Establish a maximum excess O_2 operating limit or operating curve according to the requirements in § 60.104a(i)(6). lf an O_2 operating curve is used (i.e., if different O_2 operating limits are established for different operating ranges), the owner or operator of the process heater must also monitor fuel gas flow rate, fuel oil flow rate (as applicable) and heating value content according to the methods provided in §60. 107a(d)(5), (d)(6), and (d)(4) or (d)(7), respectively.

(C) Comply with the O_2 monitoring requirements in 40 CFR 60.107a(c)(3) through (5) as follows:

(1) Install, operate, and maintain an O_2 monitor according to Performance Specification 3 of Appendix B to part 60. The span value of this O_2 monitor must be selected between 10 and 25 percent, inclusive.

(2) The owner or operator shall conduct performance evaluations of each O_2 monitor according to the requirements in 40 CFR 60. 13(c) and Performance Specification 3 of appendix B to part 60. Method 3, 3A, or 3B of appendix A-2 to part 60 shall be used for conducting the relative accuracy evaluations. The method ANSI/ ASME PTC 19.10-1981 , "Flue and Exhaust Gas Analyses," (incorporated by reference - see § 60.17) is an acceptable alternative to EPA Method 3 B of Appendix A-2 to part 60.

(3) The owner or operator shall comply with the quality assurance requirements in Procedure 1 of appendix F to part 60 for the O_2 monitor, including annual accuracy determinations for O_2 monitors, and daily calibration drift tests.

(D) Performance testing required in Conditions 36.2.b(i)(A) and 36.2.b(i)(B)is required to be completed during initial fuel gas combustion to establish an O_2 operating limit or operating curve. Subsequent performance testing will be biennially (every 2 years) for continued fuel gas combustion lasting more than a 2 year period. For the operating case where the emissions unit ceases fuel gas combustion for a period of more than 2 years, a performance test will be required to re-establish the O_2 operating limit or operating curve to demonstrate compliance with the NOx limitations of NSPS Ja upon recommencement of fuel gas combustion.

(ii) Consistent with 40 CFR 60 Appendix F Procedure 1 Section 5.1.4 Other Alternative Audits, one Relative Accuracy Test Audit (RATA) is required at least every four calendar quarters for the O_2 monitor, except in the case where the affected facility (fuel gas combustion device) does not operate in the fourth calendar quarter since the quarter of the previous RATA. If the combustion device only combusts natural gas during a calendar year period a RATA is not required for the O_2 CEM. If more than a year period exists between fuel gas combustion periods, the Permittee must complete a successful RATA according to Part 60 Appendix F on the O_2 CEM at the next period the emission unit commences fuel gas combustion.

(iii) The O_2 monitor daily calibration drift requirements of 40 CFR Appendix F Procedure 1 are not required during 24-hour periods of only natural gas combustion.

[18 AAC 50.040(a)(3) & 50.326(j)]
[40 CFR 60 Appendices & 40 CFR 60. 107a(c)(l) - (c)(6), Subpart Ja]

36.3. **Fuel Gas Combustion Device Testing**

a. The Permittee shall comply with all applicable fuel gas combustion device testing requirements as follows:

(i) The owner or operator shall conduct a performance test for each NSPS Ja fuel gas combustion device to demonstrate initial compliance with each applicable emissions limit in Condition 36.1.a according to the requirements of § 60.8. The notification requirements of § 60.8(d) apply to the initial performance test and to subsequent performance tests, but does not apply to performance tests conducted for the purpose of obtaining supplemental data because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments.

[40 CFR 60. 104a(a), Subpart Ja]

(ii) In conducting the performance tests required by NSPS Ja (or as requested by the Administrator), the owner or operator shall use the test methods in 40 CFR part 60, Appendices A-I through A-8 or other methods as specified in this section, except as provided in § 60.8(b).

[40 CFR 60. 104a(c), Subpart Ja]

(iii) The owner or operator shall determine compliance with the SO_2 and NOx emissions limits in Subpart Ja for a fuel gas combustion device according to the test methods and procedures specified in 40 CFR 60. l04a(i).

[40 CFR 60.104a(i)(l)-(i)(4)(ii)]
[40 CFR 60.104a(i)(6)-(i)(8), Subpart Ja]

(iv) The owner or operator shall determine compliance with the H_2S emissions limit in Condition 36.1 for a fuel gas combustion device according to the test methods and procedures in 40 CFR 60.104a(j).

[40 CFR 60. 104a(j)-(j)(4)(iv), Subpart Ja]

36.4. **Fuel Gas Combustion Device Work Practice or Operational Standards**

a. The Permittee shall comply with the following work practice standards:

(i) Each owner or operator that operates a fuel gas combustion device subject to NSPS Ja shall conduct a root cause analysis and a corrective action analysis as follows:

(A) For a fuel gas combustion device, each exceedance of an applicable short-term emissions limit in Condition 36.1 if the SO_2 discharge to the atmosphere is 227 kg (500 lb) greater than

the amount that would have been emitted if the emissions limits had been met during one or more consecutive periods of excess emissions or any 24-hour period, whichever is shorter.

[40 CFR. l 03a(c)(2), Subpart Ja]

(ii) A root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a discharge meeting the conditions specified in Condition 36.4.a(i)(A).

(A) If a single continuous discharge meets any of the conditions specified in Condition 36.4.a(i)(A) for two (2) or more consecutive 24-hour periods, a single root cause analysis and corrective action analysis may be conducted.

(B) If discharges occur that meet the conditions specified by Condition 36.4.a(i)(A) for more than one affected facility in the same 24-hour period, initial root cause analyses shall be conducted for each affected facility . If the initial root cause analyses indicate that the discharges have the same root cause(s), the initial root cause analyses can be recorded as a single root cause analysis and a single corrective action analysis may be conducted.

[40 CFR.103a(d), Subpart Ja]

(iii) Each owner or operator of a fuel gas combustion device subject to NSPS Ja shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to Condition 36.4.a(ii) and in accordance with the applicable requirements of Conditions 36.4.a(iii)(A) through 36.4.a(iii)(C).

(A) All corrective action(s) must be implemented within 45 days of the discharge for which the root cause and corrective action analyses were required or as soon thereafter as practicable. If an owner or operator concludes that corrective action should not be conducted, the owner or operator shall record and explain the basis for that conclusion no later than 45 days following the discharge as specified in § 60.108a(c)(6)(ix).

(B) For corrective actions that cannot be fully implemented within 45 days following the discharge for which the root cause and corrective action analyses were required, the owner or operator shall develop an implementation schedule to complete the corrective action(s) as soon as practicable.

(C) No later than 45 days following the discharge for which a root cause and corrective action analyses were required, the owner or operator shall record the corrective action(s) completed to date, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates as specified in § 60. 108a(c)(6)(x).

[40 CFR 103. 103a(e), Subpart Ja]

36.5. **Fuel Gas Combustion Device Recordkeeping and Reporting**

a. The Permittee shall comply with the notification, recordkeeping, and reporting requirements of §60.7 and other requirements as specified in NSPS Ja as follows:

(i) Each owner or operator subject to the emissions limitations in §60.102a shall comply with the notification, recordkeeping, and reporting requirements in §60.7.

(ii) Each owner or operator subject to an emission limitation in §60.102a shall notify the Administrator of the specific monitoring provisions of §§60.105a, 60.106a and 60.107a with which the owner or operator intends to comply. Notifications required by this paragraph shall be submitted with the notification of initial startup required by §60.7(a)(3).

(iii) The owner or operator shall maintain the following records in accordance with 40 CFR 60. 108a(c):

(A) Records of discharges greater than 500 lb SO_2 in excess of the allowable limits from a NSPS Ja fuel gas combustion device. The following information shall be recorded no later than 45 days following the end of a discharge exceeding thresholds:

(1) A description of the discharge.

(2) The date and time of the discharge was first identified and the duration of the discharge.

(3) The measured or calculated cumulative quantity of gas discharged over the duration. lf the discharge exceeds 24 hours, record the discharge quantity for each 24-hour period.

(4) The measured concentration of H_2S in the fuel gas for each discharge greater than 500 lb SO_2 in excess of the applicable short-term emissions limit in Condition 36.1.a(i). Process knowledge can be used to make these estimates for fuel gas combustion devices.

(5) The cumulative quantity of H_2S and SO_2 released into the atmosphere for each discharge greater than 500 lb SO_2 in

excess of the allowable limits from a NSPS Ja fuel gas combustion device. For fuel gas combustion devices, assume 99-percent conversion of H_2S to SO_2.

(6) The steps that the owner or operator took to limit the emissions during the discharge.

(7) The root cause analysis and corrective action analysis conducted as required in Condition 36.4.a(ii), including an identification of the affected facility, the date and duration of the discharge, a statement noting whether the discharge resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under Condition 36.4.a(iii).

(8) For any corrective action analysis for which corrective actions are required in Condition 36.4.a(iii), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(iv) Each owner or operator subject to this subpart shall submit an excess emissions report for all periods of excess emissions according to the requirements of §60.7(c) except that the report shall contain the following information.

(A) The date that the exceedance occurred

(B) An explanation of the exceedance

(C) Whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system

(D) A description of the action taken, if any.

(E) The information described in Condition 36.5.a(iii)(A) for all discharges listed in Condition 36.5.a(iii)(A).

(F) For any periods for which monitoring data are not available, any changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

(G) A written statement, signed by a responsible offic ial, certify ing the accuracy and completeness of the inform ation contained in the report.

[40 CFR 60.108a(a) - (d)(7), Subpart Ja]

FLARES (EU 42 [J-801 flare])

36.6. **NSPS Subpart Ja Flare Gas H_2S Concentration Limits, Root-Cause Analysis and Corrective Actions Analysis, Management Plans and Work Practices.**

36.7. **H_2S Concentration Limit.** Except as provided in Condition 36.7.b the Permittee shall not cause or allow fuel gas burned in:

a. EU ID 42 *[J-801 flare]* to contain hydrogen sulfide (H_2S) in excess of 162 ppmv determined hourly on a 3-hour rolling average basis.

b. Combustion of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit.

[40 C.F.R. 60.103a(h), Subpart Ja]

36.8. **Root-Cause Analysis and Corrective Action Analysis.** Conduct a root-cause analysis and corrective action analysis:

[40 C.F.R. 60.103a(c), Subpart Ja]

a. Anytime emissions of SO_2 from the flare exceeds 500 lb above the emission limit in any 24-hour period

[40 C.F.R. 60.103a(c)(1)(i), Subpart Ja]

b. If any discharge to the flare exceeds 500,000 scf above the baseline in any 24-hour period.

[40 C.F.R. 60.103a(c)(1)(ii), Subpart Ja]

(i) Determine the baseline flow rate according to requirements in 40 C.F.R. 103(a)(4).

(ii) Separate baseline flow rates may be established for different operating conditions.

c. Complete the root-cause analysis and corrective action analysis as soon as possible but no later than 45 days after the discharge.

[40 C.F.R. 60.103a(d), Subpart Ja]

(i) If a single discharge from a flare triggers the root-cause analysis and corrective action analysis requirements for two or more consecutive 24-hour periods, a single root-cause analysis and corrective action analysis may be conducted.

(ii) If the discharge from the flare is the result of a planned startup or shutdown of a refinery process unit or ancillary equipment connected to the flare and the procedures in the management plan required by Condition 36.9 were followed, a root-cause analysis and corrective action analysis is not required, however the discharge must be recorded and reported as described in Conditions 36.11 and 36.12.

d. Implement the corrective actions identified in a corrective action analysis within 45 days of the discharge or as soon thereafter as practicable.

[40 C.F.R. 60.103a(e)(1), Subpart Ja]

(i) Develop an implementation schedule for any corrective actions that cannot be fully implemented within 45 days of the discharge to complete those corrective actions as soon as practicable.

(ii) Record and explain the basis for concluding any corrective action shall not be implemented within 45 days of the discharge.

(iii) No later than 45 days after the discharge, record the corrective actions completed, and for actions not completed, a schedule for implementation including proposed commencement and completion dates.

e. Modified flares shall comply with the requirements of Condition 36.8 by November 11, 2015 or upon startup of the modified flare, whichever is later.

[40 C.F.R. 60.103a(f), Subpart Ja]

36.9. **Management Plan**

a. Develop and implement a written flare management plan to include the following information:

[40 C.F.R. 60.103a(a), Subpart Ja]

(i) A listing of all refinery process units, ancillary equipment, and fuel gas systems connected to the flare for each affected flare.

[40 C.F.R. 60.103a(a)(1), Subpart Ja]

(ii) Discharge minimization:

(A) Assess whether discharges to affected flares from these process units, ancillary equipment, and fuel gas systems can be minimized, including clear rationale for the selected minimization alternatives.

(B) The discharge minimization assessment shall consider:

(1) Elimination of process gas discharge to the flare through process operating changes or gas recovery at the source.

(2) Reduction of the volume of process gas to the flare through process operating changes.

(3) Installation of a flare gas recovery system or, for facilities that are fuel gas rich, a flare gas recovery system, and a co-generation unit or combined heat and power unit.

(4) Minimization of sweep gas flow rates and, for flares with water seals, purge gas flow rates.

(C) Identify the minimization alternatives that have been implemented by the due date for the flare management plan and include a schedule for prompt implementation of any selected measures that cannot be reasonably completed by that date.

(D) If no minimization alternatives have been identified, the plan shall include a statement, with justifications, that flow reduction could not be achieved.

[40 C.F.R. 60.103a(a)(2), Subpart Ja]

(iii) A description of each flare, including:

(A) A general description of the flare, as required by 40 C.F.R. 60.103a(a)(3)(i);

(B) A description and simple process flow diagram showing the interconnection of the components of the flare described in 40 C.F.R. 60.103a(a)(3)(ii);

(C) Flare design parameters, including considerations described in 40 C.F.R. 60 .103a(a)(3)(ii);

(D) Description and simple process flow diagram showing all gas lines (including flare, purge (if applicable), sweep, supplemental and pilot gas) that are associated with the flare, including the items described in 40 C.F.R. 60.103a(a)(3)(iv);

(E) For each flow rate, H_2S, and sulfur content monitor provide a detailed description of the manufacturer's specifications as described in 40 C.F.R. 60.103a(a)(3)(v);

(F) An evaluation of the baseline flow to the flare, after implementing the minimization assessment in Condition 36.9.b(ii); not including pilot gas flow or purge gas flow. Separate baseline flow rates may be established for different operating conditions provided that the management plan includes:

(1) A primary baseline flow rate that will be used as the default baseline;

(2) A description of each special condition for which an alternative baseline is established including the rationale, the daily flow, and the expected duration of the special conditions;

(3) Procedures to minimize discharges to the flare during each special condition.

[40 C.F.R. 60.103a(a)(4), Subpart Ja]

(G) Procedures to minimize or eliminate discharges to the flare during planned startup and shutdown of the refinery process units and ancillary equipment that are connected to the flare, along with a schedule for prompt implementation of any procedures that cannot be reasonably implemented as of the date of the submission of the flare management plan.

[40 C.F.R. 60.103a(a)(5), Subpart Ja]

(H) Procedures to reduce flaring in cases of fuel gas imbalance (i.e. excess fuel gas for the refinery's energy needs) along with a schedule for prompt implementation of any procedures that cannot be reasonably implemented as of the date of the submission of the flare management plan.

[40 C.F.R. 60.103a(a)(6), Subpart Ja]

b. Complete, submit, and update the management plan as follows:

[40 C.F.R. 60.103a(b), Subpart Ja]

(i) For newly constructed or reconstructed flares, the flare management plan shall be developed and implemented by no later than the date that the flare becomes an affected facility subject to NSPS Subpart Ja. For modified flares, the flare management plan shall be developed and implemented no later than November 11, 2015 or upon startup of a modified flare, whichever is later.

(ii) Submit the plan to the Administrator and to EPA Office of Air Quality Planning and Standards, Sector Polices and Programs Division.

(iii) Update the plan periodically to account for changes in operation of the flare.

(iv) Resubmit the plan to the Administrator only if an alternative baseline flow rate is added, an existing baseline is revised, a flare gas recovery system is installed, or flare designations or monitoring methods are changed.

36.10. **Monitoring.** The Permittee shall monitor compliance with the standards as follows:

a. For compliance with the H_2S fuel gas concentration limit in Condition 36.7, install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration by volume (dry basis) of H_2S in the fuel gases before being burned.

(i) The span value for this CEMS is 300 ppmv H_2S.

(ii) Install, operate, and maintain each H_2S monitor according to Performance Specification 7 of Appendix B to 40 C.F.R Part 60.

[40 C.F.R. 60.107a(a)(2)(i), Subpart Ja]

(iii) Conduct performance evaluations for each H_2S monitor according to the requirements of 40 C.F.R 60.13(c), and Performance Specification 7 of Appendix B to 40 C.F.R Part 60.

[40 C.F.R. 60.107a(a)(2)(ii), Subpart Ja]

b. Determine the total reduced sulfur concentrations, as required by Condition 36.8, using one or more of the following methods:

(i) **Total Reduced Sulfur Monitoring:** Install, operate, calibrate and maintain an instrument for continuously monitoring and recording the concentration of total reduced sulfur in gas discharged to the flare.

[40 C.F.R. 60.107a(e)(1), Subpart Ja]

(A) The span value for this CEMS should be roughly 1.1 to 1.3 times the maximum anticipated sulfur concentration, but no less than 5,000 ppmv total reduced sulfur.

(B) Install, operate, and maintain each total reduced sulfur monitor according to Performance Specification 5 of Appendix B to 40 C.F.R Part 60.

[40 C.F.R. 60.107a(e)(1) (i), Subpart Ja]

(C) Conduct performance evaluations for each total reduced sulfur monitor according to the requirements of 40 C.F.R 60.107a(e)(1)(ii), 40 C.F.R 60.13(c), and Performance Specification 5 of Appendix B to 40 C.F.R Part 60.

[40 C.F.R. 60.107a(e)(1)(ii), Subpart Ja]

(ii) **H_2S Monitoring:** Install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration of H_2S in gas discharged to the flare; and collect and analyze samples of the gas to calculate total sulfur concentrations.

[40 C.F.R. 60.107a(e)(2), Subpart Ja]

(A) The span value for this CEMS should be roughly 1.1 to 1.3 times the maximum anticipated sulfur concentration, but no less than 5,000 ppmv H_2S.

(B) A single dual-range H_2S monitor may be used to comply with the requirements of Conditions 36.9.a and 36.9.b(ii) of this section provided the applicable span requirements are met.

[40 C.F.R. 60.107a(e)(2)(i), Subpart Ja]

(C) Install, operate, and maintain each H_2S monitor according to Performance Specification 7 of Appendix B to 40 C.F.R Part 60.

[40 C.F.R. 60.107a(e)(2)(i), Subpart Ja]

(D) Conduct performance evaluations for each H_2S monitor according to the requirements of 40 C.F.R 60.107a(e)(2)(ii), 40 C.F.R 60.13(c), and Performance Specification 7 of Appendix B to 40 C.F.R Part 60.

(E) **Determine Total Reduced Sulfur to H_2S Ratio**. In the first 10 operating days after the date the flare must begin compliance with the requirements of Condition 36.8, the Permittee shall collect representative daily samples of the gases discharged to the flare; thereafter representative weekly samples shall be collected.

(1) Analyze the daily (and subsequent weekly) samples for total sulfur as required by 40 C.F.R 60.107a(e)(2)(v).

(2) Develop a 10-day average total sulfur-to H_2S ratio and an acceptable range based on the 95% confidence interval for distribution of daily ratios following the procedures described in 40 C.F.R. 60.107a(e)(2)(vi).

(3) For each day during the period when data are being collected to develop the 10-day average, estimate the total sulfur concentration using the measured total sulfur concentration being measured that day.

(4) For days when data are not being collected, multiply the most recent 10-day average total sulfur-to-H_2S ratio by the daily average H_2S concentration measured by the monitor to estimate total sulfur concentrations.

(5) If the total sulfur-to-H_2S ratio for a subsequent weekly sample is outside the acceptable range for the most recent distribution of daily ratios, determine a new 10-day average ratio and acceptable range using that day's sample plus samples collected over the following 9 operating days.

[40 C.F.R. 60.107a(e)(2)(ix), Subpart Ja]

(iii) Different options may be used for different gas lines in the flare system.

(iv) If a monitoring system is in place for a modified flare that is capable of complying with the requirements related to either Condition 36.10.b(i) or 36.10.b(ii), Permittee must comply with the applicable monitoring requirements upon startup of the modified flare.

(v) If a monitoring system is not in place for a modified flare that is capable of complying with the requirements related to either Condition 36.10.b(i), or 36.10.b(ii), Permittee must comply with the applicable requirements no later than November 11, 2015 or upon startup of the modified flare, whichever is later.

c. **Flow monitoring for flares.** Permittee shall install, operate, calibrate and maintain a continuous parametric monitoring system (CPMS) to measure and record the flow rate of gas discharged to the flare, according to the requirements of 40 C.F.R. 60.107a(f).

[40 C.F.R. 60.107a(f), Subpart Ja]

36.11. **Recordkeeping.** The owner or operator shall maintain the following records for a modified flare beginning no later than November 11, 2015 or upon startup of the modified flare, whichever is later. For a new or reconstructed flare, the owner or operator shall maintain the following records upon startup of the new or reconstructed flare:

a. A copy of the flare management plan;

b. Records of discharges from the flare greater than 500 lb SO_2 in any 24-hour period, and discharges in excess of 500,000 scf above baseline in any 24-hour period, including:

[40 C.F.R. 60.108a(c)(6), Subpart Ja]

(i) A description of the discharge.

(ii) The date and time the discharge was first identified and the duration of the discharge.

(iii) The measured or calculated cumulative quantity of gas discharged over the discharge duration. If the discharge duration exceeds 24 hours, record the quantity of gas discharged to the flare for each 24-hour period. Engineering calculations are not allowed for flares.

(iv) For discharges greater than 500 lb SO_2 in any 24 hour period, the measured total sulfur concentration or both the measured H_2S concentration and the estimated total sulfur concentration in the fuel gas at a representative location in the flare inlet.

(v) For discharges greater than 500 lb SO_2 in any 24-hour period, the cumulative quantity of H_2S and SO_2 released into the atmosphere, assuming 99 percent conversion of reduced sulfur or total sulfur to SO_2.

(vi) The steps that the owner or operator took to limit the emissions during the discharge.

(vii) The root cause analysis and corrective action analysis conducted as required by Condition 36.8, including an identification of the affected facility, the date and duration of the discharge, a statement noting whether the discharge resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary.

(viii) For any corrective action analysis for which corrective actions are required, a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(ix) For each discharge from any affected flare that is the result of a planned startup or shutdown of a refinery process unit or ancillary equipment connected to the affected flare, a statement that a root cause analysis and corrective action analysis are not necessary because the owner or operator followed the flare management plan.

c. If Permittee elects to monitor total sulfur using the procedures described in Condition 36.10.b(ii): records of the H_2S and total sulfur analyses of each grab or integrated sample, the calculated daily total sulfur-to-H_2S ratios, the calculated 10-day average total sulfur-to-H_2S ratios and the 95-percent confidence intervals for each 10-day average total sulfur-to-H_2S ratio.

[40 C.F.R. 60.108a(c)(7), Subpart Ja]

36.12. **Reporting**. The Permittee shall report as follows:

a. Submit the management plan as required in Condition 36.9.b

[40 C.F.R. 60.103a(b), Subpart Ja]

b. For the purpose of EEMSP Reports and Summary Reports required under Conditions 27 and 28, the Permittee shall report as follows:

(i) Report all rolling 3-hour periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system under Condition 36.9.a exceeds the limit in Condition 36.7.

[40 C.F.R. 60.107a(i)(2)(i), Subpart Ja]

(ii) Report all discharges from the flare greater than 500 lb SO_2 in any 24-hour period, and discharges in excess of 500,000 scf above baseline in any 24-hour period. For new or reconstructed flares, reporting requirements begin upon startup of the newly constructed or reconstructed flare. For a modified flare, reporting shall begin no later than November 11, 2015 or upon startup of the modified flare, whichever is later.

[40 C.F.R. 60.108a(d)(5), Subpart Ja]

(iii) Submit the reports required under Condition 36.12 to the EPA semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period.

(iv) Submit a signed statement certifying the accuracy and completeness of the information contained in the report required in Condition 36.12.

c. Submit excess emissions reports according to the requirements of 40 C.F.R. 60.7(c), except that the reports shall include:

[40 C.F.R. 60.108a(d), Subpart Ja]

(i) The date that the exceedance occurred;

(ii) An explanation of the exceedance;

(iii) Whether the exceedance was concurrent with a startup, shutdown, or malfunction of an affected facility or control system;

(iv) A description of the action taken, if any; and

(v) The information required by Condition 36.11.b

(vi) For any periods for which monitoring data are not available, any changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit; operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

(vii) A written statement, signed by a responsible official, certifying the accuracy and completeness of the information contained in the report.

Steam Generating Units Subject to NSPS Subpart Dc

37. NSPS Subpart Dc Fuel Consumption. For EU ID 29 *[H-1701]*, the Permittee shall record the amounts of each fuel combusted during each day and maintain the records for a period of two years following the date of such record.

37.1. As an alternative to meeting the requirements of Condition 37, for emission units that combusts only natural gas to demonstrate compliance with the SO2 standard, or for fuels not subject to an emissions standard (excluding opacity), the Permittee may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

a. For EU ID 29*[H-1701]* submit records collected per Condition 37.1 with each operating report as required by Condition 141.

[40 C.F.R. 60.48c(g)(1 & 2) & (h), Subpart Dc]

Turbines Subject to NSPS Subpart GG

38. NSPS Subpart GG NO_X Standard. The Permittee shall not allow the exhaust gas concentration of NO_X from EU IDs 32 and 33 *[GT-1400 and GT-1410]* to exceed 160 ppmv at 15 percent O_2 dry exhaust basis.

[18 AAC 50.040(a)(2)(V)]
[40 C.F.R. 60.332(a)(2) & (c), Subpart GG]

38.1. **Monitoring, Recordkeeping and Reporting.** Operate EU IDs 32 and 33 *[GT-1400 and GT-1410]* with water injection at not less than 0.8 pounds of water per pound of fuel (whether NG, LPG or diesel) when the units operate at loads greater than 2.5 megawatts.

[18 AAC 50.040(a)(1) &(j); 18 AAC 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[Permit to Operate No. 9323-AA008 (amended), Conditions 4 & 5, 11/18/96]

a. Calibrate, maintain and operate a continuous monitoring system (CMS) to monitor and record the fuel consumption and the ratio of water-to-fuel being fired in EU IDs 32 and 33 *[GT-1400 and GT-1410]*.

[Permit to Operate No. 9323-AA008 (amended), Condition 21 and Exhibit C, 11/18/96]
[40 C.F.R. 60.334(a), Subpart GG]

b. For each affected unit that elects to continuously monitor parameters or emissions, or to periodically determine the fuel nitrogen content under this subpart, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 C.F.R. 60.7(c) as summarized in Condition 27. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under Condition 27, periods of excess emissions and monitor downtime that shall be reported are defined in 40 C.F.R. 60.334(j)(1)(i). All reports required under Condition 27 shall be postmarked by the 30th day following the end of each 6-month period.

[40 C.F.R. 60.334(j)(1 & 5), Subpart GG, 7/1/01]

(i) Report under Condition 27 the date, duration, average water-to-fuel ratio, average fuel consumption, and gas turbine load for any period in which the hourly water-to-fuel ratio for a turbine unit falls below the limit in Condition 38.1.

[Permit to Operate No. 9323-AA008 (amended), Exhibit D (3.c), 11/18/96]
[40 C.F.R. 60.334(j)(1), Subpart GG]

c. Report as excess emission under Condition 140 if any of EU IDs 32 or 33 *[GT-1400 and GT-1410]* exceeds the limit in Condition 38 or 38.1, except as provided in Condition 11.

d. Report under Condition 141 the mean semiannual water-to-fuel ratio for each turbine unit, based on periods of operation at loads greater than 2.5 megawatts.

[Permit to Operate No. 9323-AA008 (amended), Exhibit D (3.c), 11/18/96]

e. **Periodic Re-Verification**. Within 12-months of the effective date of this permit, the Permittee shall conduct a NO_X performance test on one unit of EU IDs 32 or 33 to verify that the water injection rate listed in Condition 38.1 is equivalent to maintain compliance with the NO_X standard of Condition 38. The test shall be conducted at a load above 2.5 megawatts. An updated water-to-fuel ratio injection rate shall be used in lieu of Condition 38.1 if test results show a different value is needed to ensure compliance.

[18 AAC 50.040(a)(1) &(j); 18 AAC 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]

39. NSPS Subpart GG Sulfur Standard. The Permittee shall not allow the sulfur content for the fuel burned in EU IDs 32 and 33 *[GT-1400 and GT 1410]* to exceed 0.8 percent by weight.

[18 AAC 50.040(a)(2)(V)]
[40 C.F.R. 60.333(b), Subpart GG]

39.1. **Monitoring.** The Permittee shall monitor compliance with the standard in Condition 39, as follows:

[18 AAC 50.040(a)(2)(V)]
[40 C.F.R. 60.334 & 60.335, Subpart GG]

a. Monitor the total sulfur content of the fuel being fired in the turbine, except as provided in Condition 39.1.b. The sulfur content of the fuel must be determined using total sulfur methods described in Condition 39.2.a and 39.2.b. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), ASTM D4084–82, 94, D5504–01, D6228–98, or Gas Processors Association Standard 2377–86, which measure the major sulfur compounds, may be used.

[40 C.F.R. 60.334(h)(1), Subpart GG]

b. The owner or operator may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 C.F.R. 60.331(u), regardless of whether an existing custom schedule approved by the

Administrator requires such monitoring. The owner or operator shall use one of the following sources of information to make the required demonstration:

(i) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or

(ii) Representative fuel sampling data, which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in 40 C.F.R. 75, Appendix D, Section 2.3.1.4 or 2.3.2.4 is required.

[40 C.F.R. 60.334(h)(3), Subpart GG]

c. For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and for which a custom fuel monitoring schedule has previously been approved, the owner or operator may, without submitting a special petition to the Administrator, continue monitoring on this schedule.

[40 C.F.R. 60.334(h)(4), Subpart GG]

d. The frequency of determining the sulfur content of the fuel shall be as follows:

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 60.334(i), Subpart GG]

(i) **Fuel oil**. For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in Sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of Appendix D of 40 C.F.R Part 75 (i.e., flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank). If an emission allowance is being claimed for fuel-bound nitrogen, the nitrogen content of the oil shall be determined and recorded once per unit operating day.

[40 C.F.R. 60.334(i)(1), Subpart GG]

(ii) **Gaseous fuel**. Monitor the sulfur content of the NG, LPG, and butane fired in the turbines once a month.

(A) If sulfur monitoring determines that sulfur levels are always below 80 ppm measured as H_2S, Permittee shall monitor the sulfur content of the NG, LPG, and butane in accordance with Condition 39.2.b at least semiannually.

[18 AAC 50.040(a)(2)(V) & (j) & 50.326(j)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[40 C.F.R. 60.334(i)(3), Subpart GG]
[EPA Region X Alternative Monitoring Plan, 2/28/97]

39.2. **Test Methods and Procedures.** If the owner or operator is required under Condition 39.1.d(i) or 39.1.d(ii) to periodically determine the sulfur content of the fuel combusted in the turbine, a minimum of three fuel samples shall be collected during the performance test. Analyze the samples for the total sulfur content of the fuel using Conditions 39.2.a and/or 39.2.b:

[18 AAC 50.040(a)(2)(V)]
[40 C.F.R. 60.335(b), Subpart GG]

a. For liquid fuels, ASTM D129–00, D2622–98, D4294–02, D1266–98, D5453–00 or D1552–01; or

[40 C.F.R. 60.335(b)(10)(1), Subpart GG]

b. For gaseous fuels, ASTM D1072-80, 90; D3246-81, 92, 96; D4468-85; or D6667-01. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the prior approval of the Administrator.

[40 C.F.R. 60.335(b)(10)(2), Subpart GG]

c. The fuel analyses required under Condition 39.2 may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

[40 C.F.R. 60.335(b)(11), Subpart GG]

39.3. **Recordkeeping.** Maintain records on site for a period of five years from the generation of such records. Keep records of

a. all sulfur monitoring data as required by Condition 39.1;

b. documents showing each fuel supplier or source of fuel;

c. all turbine operations on fuels other than NG, LPG, and butane.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[EPA Region X Alternative Monitoring Plan, 2/28/97]

39.4. **Reporting.** The Permittee shall report as follows:

a. Report annually the results of all sulfur monitoring required by Condition 39.1; and

b. For each affected unit that periodically determines the fuel sulfur content under Condition 39.1.a, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 C.F.R. 60.7(c) as

summarized in Condition 27 except where otherwise approved by a custom fuel monitoring schedule, as described in Conditions 39.4.b(i) and 39.4.b(ii) below. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction as described by 40 C.F.R. 60.334(j)(2).

(i) For the purpose of EEMSP reports and summary report required under Conditions 27 and 28, report any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent sulfur by weight as excess emissions.

(ii) Report any changes in supplier or source of fuel within 60 days of such a change.

[18 AAC 50.040(a)(2)(V) & (j); 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[40 C.F.R. 60.334(c)(2) & 60.334(j), Subpart GG]
[EPA Region X Alternative Monitoring Plan, 2/28/97]

Stationary Reciprocating Internal Combustion Engines (RICE) Subject to NSPS 40 C.F.R. 60 Subpart JJJJ, EU-ID 121 (*EG705)*

40. Emission Standards.

40.1. Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table F for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

[40 C.F.R. 60.4233(e) and Table 1 of Subpart JJJJ]

Table F – Emission Standards

		Emission Standards g/HP-hr		
Rating	Manufacture Date	NOx	CO	VOC
25<HP<130	1/1/2009	10 [c]	387	N/A
HP≥130		2.0	4.0	1.0

Notes:

c The emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_X + HC.

41. Compliance Requirements.

41.1. If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in Conditions 104.1.b

and 41.1.b. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in Conditions 104.1.b and 41.1.b, is prohibited. If you do not operate the engine according to the requirements in Conditions 104.1.b and 41.1.b, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

a. You may operate your emergency stationary ICE for any combination of the purposes specified in Conditions 104.1.b and 41.1.b for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 41.1.b counts as part of the 100 hours per calendar year allowed by this Condition 104.1.b. May be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing is limited to 100 hours per calendar year.

    (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks

    (ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

    (iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

b. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in Condition 104.1.b. Except as provided in Condition 41.1.b(i), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[40 C.F.R. 60.4243(d)(2-3), Subpart JJJJ]

42. Notification, reporting, and recordkeeping requirements. Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements**.**

42.1. Owners and operators of all stationary SI ICE must keep records of the information in Conditions 42.1.a through 42.1.c.

a. All notifications submitted to comply with this subpart and all documentation supporting any notification.

b. Maintenance conducted on the engine.

c. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

[40 C.F.R. 60.4245(a), Subpart JJJJ]

Turbines Subject to NSPS Subpart KKKK

43. General Standards. For EU IDs 32A and 33A *[GT-1400A and GT-1410A when installed]*, operate and maintain the stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices

for minimizing emissions at all times including during startup, shutdown, and malfunction.

[18 AAC 50.040(a)(2)(QQ)]
[40 C.F.R. 60.4333(a), Subpart KKKK]

43.1. **Continuous Compliance**. If the Permittee does not use water or steam injection to control NO_X emissions, perform annual performance tests in accordance with §60.4400 to demonstrate continuous compliance. If the NO_X emission result from the performance test is less than or equal to 75 percent of the NO_X emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_X emission limit for the turbine, you must resume annual performance tests.

[18 AAC 50.040(a)(2)(QQ)]
[40 C.F.R. 60.4340(a), Subpart KKKK]

44. NSPS Subpart KKKK NO_X Standard. For a modified or reconstructed turbine (EU IDs 32A and 33A) >50MMBtu/hr and ≤ 850 MMBtu/hr, the Permittee:

44.1. shall not allow the exhaust gas concentration of NO_X from EU IDs 32A and 33A *[GT-1400A and GT-1410A]* to exceed 42 ppm at 15 percent O_2 dry exhaust basis (or 2.0 lb/MW-hr) when firing natural gas fuels; or

44.2. shall not allow the exhaust gas concentration of NO_X from EU IDs 32A and 33A *[GT-1400A and GT-1410A]* to exceed 96 ppm at 15 percent O_2 dry exhaust basis (or 4.7 lb/MW-hr) when firing fuels other than natural gas; or

44.3. shall not allow the exhaust gas concentration of NO_X from EU IDs 32A and 33A *[GT-1400A and GT-1410A]* for turbines operating at less than 75 percent of peak load, and turbines operating at temperatures less than 0 °F to exceed 150ppm at 15 percent O_2 dry exhaust basis (or 8.7 lb/MW-hr).

[18 AAC 50.040(a)(2)(QQ)]
[40 C.F.R. 60.4320(a) and Table 1, Subpart KKKK]

44.4. Turbine NO_X Performance Tests.

a. **Monitoring**. After completion of the CoGeneration Turbine Upgrade Project, conduct an initial performance test, as required in §60.8.

(i) Subsequent NO_X performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test) in accordance with 40 C.F.R. 60.4400 except as allowed by Condition 43.1.

(ii) No performance test is required for turbines operated under Condition 44.3 at less than 0 °F.

b. **Turbine Load**. The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. Conduct testing at the highest achievable load point, if at least 75 percent of peak

load cannot be achieved in practice. Conduct three separate test runs for each performance test. The minimum time per run is 20 minutes.

(i) If the stationary combustion turbine combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.

(ii) Compliance with the applicable emission limit in Conditions 44.1 through 44.2 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NO_X emission rate at each tested level meets the applicable emission limit.

(iii) The ambient temperature must be greater than 0 °F during the performance test.

c. **Reporting**. For performance tests conducted for turbines operated under Condition 44.1 or 44.2 record and report as set forth in Section 5 and 40 C.F.R. 60.4375(b).

[18 AAC 50.040(a)(2)(QQ)]
[40 C.F.R. 60.4375(b) and 60.4400, Subpart KKKK]

45. NSPS Subpart KKKK SO_2 Standard. The Permittee has elected not to monitor the total sulfur content of the fuel combusted in the turbine(s) since the fuel is demonstrated that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less as set forth in Condition 10.4 and the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet as set forth in Condition 14.

45.1. The Permittee shall maintain the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying the maximum total sulfur content.

[18 AAC 50.040(a)(2)(QQ)]
[40 C.F.R. 60.4365(a), Subpart KKKK]

Petroleum Liquid Storage Vessels (Tanks) Subject to NSPS Subpart K

46. NSPS Subpart K Standards. For EU IDs 58 and 87 – 89 *[TK-12, TK-64, TK-65, and TK-6]*, storage vessels equipped with floating roofs, the Permittee shall comply with the applicable provisions of NESHAP Subpart CC in Condition 70 to ensure compliance with 40 C.F.R. 60 Subpart K.

[18 AAC 50.040(a)(2)(K) & (c)(10)]
[40 C.F.R. 60, Subpart K; 40 C.F.R. 63.640(n)(5), Subpart CC]

Petroleum Liquid Storage Vessels (Tanks) Subject to NSPS Subpart Ka

47. NSPS Subpart Ka Standards. For EU IDs 59, 60, and 107 *[TK-13, TK-14, and TK-04C]*, storage vessels equipped with internal floating roofs, the Permittee shall store only petroleum liquids with true vapor pressure of, as stored, equal to or less than 570 mm Hg (11.1 psia). If the true vapor pressure of the petroleum liquid, as stored, is greater than 570 mm Hg (11.1 psia), the storage vessel shall be equipped with a vapor recovery system or its equivalent.

[18 AAC 50.040(a)(2)(L)]

[40 C.F.R. 60.112a(a)(2) & (b), Subpart Ka]

47.1. **Monitoring.** Unless exempted under 40 C.F.R. 60.115a(d), the Permittee shall determine the maximum true vapor pressure of the petroleum liquid stored as follows:

a. Available data on the typical Reid vapor pressure and the maximum expected storage temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517, unless the Department specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

b. The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa (2.0 psia) or whose physical properties preclude determination by the recommended method is to be determined from available data.

[40 C.F.R. 60.115a(b) & (c), Subpart Ka]

47.2. **Recordkeeping.** The Permittee shall maintain a record of:

a. petroleum liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period; and

b. the true vapor pressure in Condition 47.1.b if the estimated true vapor pressure is greater than 6.9 kPa (1.0 psia).

[40 C.F.R. 60.115a(a) & (c), Subpart Ka]

47.3. **Reporting.** The Permittee shall report as follows:

a. Include with the operating report under Condition 141 the records required under Condition 47.2.

b. Report under Condition 140 if the petroleum liquid stored has a true vapor pressure greater than 76.6 kPa (11.1 psia).

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]

Volatile Organic Liquid Storage Vessels (Tanks) Subject to NSPS Subpart Kb

48. NSPS Subpart Kb Requirements. The Permittee shall comply with 40 C.F.R. 60 Subpart Kb, as follows:

[18 AAC 50.040(a)(2)(M)]
[40 C.F.R. 60.110b & 60.112b, Subpart Kb]

48.1. For EU ID 120 *[Tank 67]*, a storage vessel meeting the design requirements specified in 40 C.F.R. 60.112b(a), the Permittee shall equip with a fixed roof in combination with an internal floating roof, as described in 40 C.F.R. 60.112b(a)(1).

[40 C.F.R. 60.112b(a), Subpart Kb]

48.2. Alternative means of compliance. For EU ID 120 *[Tank 67]*, the Permittee may choose to comply with 40 C.F.R. 65 Subpart C, in accordance with 40 C.F.R. 60.110b(e), to satisfy the requirements of 40 C.F.R. 60.112b through 60.117b.

[40 C.F.R. 60.110b(e), Subpart Kb]

49. NSPS Subpart Kb Testing and Procedures. After installing the control equipment required to meet the requirements of Condition 48.1 (permanently affixed roof and internal floating roof), the Permittee shall conduct visual inspections, repairs as needed, and maintain records for EU ID 120 *[Tank 67]*, in accordance with the applicable procedures, as follows:

49.1. Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. I f there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

49.2. For storage vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

49.3. For vessels equipped with a double-seal system as specified in 40 C.F.R. 60.112b(a)(1)(ii)(B):

a. Visually inspect the vessel as specified in Condition 49.4 at least every 5 years; or

b. Visually inspect the vessel as specified in Condition 49.2.

49.4. Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this Condition 49.4 exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this

provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in Conditions 49.2 and 49.3.b and at intervals no greater than 5 years in the case of vessels specified in Condition 49.3.a.

[40 C.F.R. 60.113b(a)(1 – 4), Subpart Kb]

49.5. Notify the Department in the next operating report required by Condition 141 of the results of any inspections conducted under Condition 49.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)]

50. NSPS Subpart Kb Notification. Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by Conditions 49.1 and 49.4 to afford the Administrator the opportunity to have an observer present. If the inspection required by Condition 49.4 is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

[40 C.F.R. 60.113b(a)(5), Subpart Kb]

51. NSPS Subpart Kb Monitoring. The Permittee shall comply with the following:

51.1. Determine the maximum true vapor pressure of a VOL by using available data on storage temperature as follows:

a. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated using the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated using the maximum local monthly average ambient temperatures as reported by the National Weather Service.

b. For refined petroleum products, use the Reid vapor pressure at maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, and the nomographs in American Petroleum Institute (API) Bulletin 2517.

[40 C.F.R. 60.116b(e)(1), Subpart Kb]

52. Recordkeeping. The Permittee shall comply with the following:

52.1. For the life of the storage vessel, EU ID 120 *[Tank 67]*, the Permittee shall keep readily accessible records showing the dimensions and an analysis showing the capacity of the storage vessel.

[40 C.F.R. 60.116b(b), Subpart Kb]

52.2. The Permittee shall keep copies of all records required herein for at least two years.

[40 C.F.R. 60.116b(a), Subpart Kb]

a. Maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period of EU ID 120 *[Tank 67]*.

[40 C.F.R. 60.116b(c), Subpart Kb]

b. For EU ID 120 *[Tank 67]* equipped with fixed roof and internal floating roof as described in Condition 48.1, the Permittee shall keep a record of each inspection performed as required by Condition 49.1. Each record shall

(i) identify the storage vessel on which the inspection was performed; and

(ii) contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

[40 C.F.R. 60.115b(a)(2), Subpart Kb]

53. NSPS Subpart Kb Reporting. For EU ID 120 *[Tank 67]* equipped with fixed roof and internal floating roof as described in Condition 48.1, the Permittee shall report, as follows:

53.1. Submit a report to the Department within 30 days of the inspection if any of the conditions described in Condition 49.2 are detected during the required annual visual inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made; and

53.2. Submit a report to the Department within 30 days of the inspection after each inspection required by Condition 49.3 that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in Condition 49.3.b. The report shall identify the storage vessel and the reason it did not meet the specifications of Condition 48.1 or 49.3 and list each repair made.

[40 C.F.R. 60.115b(a)(1, 3, & 4), Subpart Kb]

Asphalt Storage Tanks Subject to NSPS Subpart UU

54. NSPS Subpart UU Standard for Particulate Matter. The Permittee shall not cause exhaust gases with opacity greater than zero (0) percent to be discharged into the atmosphere from any of asphalt storage tanks, EU IDs 77, 79 – 82, 92 and 93 *[TK-42, TK-51, TK-55, TK-57, TK-59, TK-94 and TK-95]*, except for one consecutive 15-minute period in any 24-hour period when the transfer lines are being blown for clearing. The opacity control device shall not be bypassed during this 15-minute period.

[18 AAC 50.040(a)(2)(Y)]
[40 C.F.R. 60.472(c)]

54.1. **Monitoring, Recordkeeping, and Reporting.** The Permittee shall comply with the following:

a. In case of replacement or modification[14] of the installed opacity control device used to comply with the emission limit in Condition 54, the Permittee shall provide to the Administrator and the Department information describing the operation of the replaced or modified control device, and the process parameter(s) which would indicate proper operation and maintenance of the device.

b. The Permittee is exempted from the quarterly reports required under 40 C.F.R. 60.7(e) Subpart A for the Subpart UU affected emission units.

c. The Permittee shall determine compliance with the particulate matter standards in Condition 54 by conducting monthly Method 9 opacity observations during the months of tank use and operation, following the procedures in 40 C.F. R. 60.11 Subpart A.

d. The Permittee shall report under Condition 140 if the observed opacity exceeds the limit in Condition 54.

[18 AAC 50.040(a)(2)(Y) & (j); 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[40 C.F.R. 60.473(c) & (d); 40 C.F.R. 60.474(b) & (c)(5)]

Emission Units subject to NSPS Subpart GGG/VV, and NSPS Subpart GGGa/VVa Standards of Performance for Equipment Leaks of VOC in the Synthetic Chemicals Manufacturing Industry

55. NSPS Subpart GGG/VV Standards. The Permittee shall comply with the applicable requirements of 40 C.F.R. 60.592 in Subpart GGG and associated requirements of 40 C.F.R. 60.482 through 60.487 in Subpart VV for affected equipment in VOC service located in EU IDs 99, 102, 103, 104, 117 and 119 *[Hydrocracker, PRIP Unit, DIB Unit, Vacuum Unit, and DDU]*.

[18 AAC 50.040(a)(2)(Z) & (a)(2)(BB)]
[40 C.F.R. 60.592, Subpart GGG & 60.482 – 60.487, Subpart VV]

56. NSPS Subpart GGGa/VVa Standards. The Permittee shall comply with the applicable requirements of 40 CFR 60.592a in Subpart GGGa and associated requirements of 40 CFR 60.482a through 60.487a in Subpart VVa for affected equipment in VOC service located in EU IDs 96, 100, 102, 103, 104, 117, 126, 127, and 128 *[Crude Unit, Hydrogen Unit, PRIP Unit, DIB Unit, Vacuum Unit, DDU Unit, C-810A, C-810B, and Amine Unit]*. Affected equipment includes that in VOC service as defined in 40 CFR 60.481a and in Organic HAP service as defined in 40 C.F.R. 63.641.

[40 C.F.R. 60.592a, Subpart GGGa & 60.482a – 60.487a, Subpart VVa]

57. NSPS Subpart GGG/GGGa/VV/VVa Test Methods and Procedures.

[40 C.F.R. 60.592(e), and 40 C.F.R. 60.592a(e)]

57.1. Determine compliance with the standards in Conditions 55 and 56 by using Method 21 in 40 C.F.R. 60 Appendix A to determine the presence of leaking

[14] The Permittee has already complied with the initial notification requirements for the control device used (opacity filters) on 11/27/96, 3/24/00, and 3/26/03. Similar notification is required should the Permittee modify the currently installed control devices.

sources (valves, pumps, compressors, seals, etc.). Calibrate the instrument before use each day of its use by the procedures specified in Method 21.

[40 C.F.R. 60.485(c) and 40 C.F.R 60.485a(c)]

57.2. Determine compliance with the no detectable emission standards in Conditions 55 and 56 by using Method 21 to determine the background level. Traverse all potential leak interfaces as close to the interface as possible. Determine compliance by comparing the arithmetic difference between the maximum concentration indicated by the instrument and the background level with 500 ppm.

[40 C.F.R. 60.485(c)(2) and 40 C.F.R 60.485a(c)(2)]

57.3. Test each piece of equipment unless a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, follow the methods and procedures in 40 C.F.R. 60.485(d) or 60.485a(d) as approriate.

[40 C.F.R. 60.485(d) and 40 C.F.R 60.485a(d)]

57.4. Equipment is in light liquid service if the percent evaporated is greater than 10 percent at 150°C as determined by the methods listed in 40 C.F.R. 60.593(d) or 60.593a(d).

[40 C.F.R. 60.592(d), 60.593(a) & (d), 60.485(e), 60.592a(d), 60.593a(a) & (d), 60.485a(e)]

57.5. Samples used in conjunction with Conditions 57.3, 57.4 and 57.6 shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

[40 C.F.R. 60.485(f) and 40 C.F.R 60.485a(f)]

57.6. Determine compliance with the flare standards per Condition 34.

[40 C.F.R. 60.18, 40 C.F.R. 60.485(g) and 40 C.F.R 60.485a(g)]

57.7. For valves in gas/vapor service and in light liquid service, determine compliance with the alternative standards in §60.483-1, 60.483-2 60.483-1a, and 60.483-2a as follows:

[40 C.F.R. 60.485(h) and 40 C.F.R 60.485a(h)]

a. Determine the percent of valves leaking using Equation 2:

- **Equation 2** $\%V_L = (V_L/V_T) * 100$

Where

$\%V_L$	=	Percent leaking valves
V_L	=	Number of valves found leaking
V_T	=	The sum of the total number of valves monitored

b. Include in the total number of valves monitored the difficult-to-monitor and unsafe-to-monitor valves only during the monitoring period in which those valves are monitored.

c. Include in the number of valves found leaking the valves for which repair has been delayed.

d. Do not include in the total number of valves monitored a valve monitored to verify repair.

58. NSPS GGG/GGGa/VV/VVa Recordkeeping Requirements.

[40 C.F.R. 60.592(e) and 40 C.F.R. 60.592a(e)]

58.1. **Leak Detection Recordkeeping**. When each leak is detected , the following requirements apply:

[40 C.F.R. 60.486(b)-(c) and 40 C.F.R. 60.486a(b)-(c)]

a. Attach a weatherproof and readily visible identification, marked with the equipment identification number, to the leaking equipment.

b. The identification on a valve may be removed after it has been monitored for 2 successive months as specified in § 60.482–7(c) or 60.482-7a(c) and no leak has been detected during those 2 months.

c. The identification on a connector may be removed after it has been monitored as specified in §60.482– 11a(b)(3)(iv) and no leak has been detected during that monitoring.

d. The identification on equipment except on a valve may be removed after it has been repaired.

e. Record in a log that is kept in a readily accessible location the information in Conditions 58.1.e(i) through 58.1.e(ix) below when a leak is detected:

(i) The instrument and operator identification numbers, and the equipment identification number.

(ii) The date the leak was detected and the dates of each attempt to repair the leak.

(iii) Repair methods applied in each attempt to repair the leak.

(iv) "Above 10,000" if the maximum instrument reading measured by the methods specified in Condition 57.1 after each repair attempt is equal to or greater than 10,000 ppm for Subpart GGG/VV; or "Maximum instrument reading measured by Method 21 at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquid dripping" for Subpart GGGa/VVa.

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(vi) The signature of the Permittee's owner, operator or designate that the repair could not be effected without a process shutdown.

(vii) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(viii) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(ix) The date of successful repair of the leak.

58.2. **Closed Vent Systems and Control Devices**. Record and keep in a readily accessible location the following information pertaining to the applicable design requirements for closed vent systems and control devices described below:

[40 C.F.R. 60.486(d) and 40 C.F.R 60.486a(d)]

a. Detailed schematics, design specifications, and piping and instrumentation diagrams.

b. Dates and descriptions of changes in the design specifications.

c. A description of the parameter or parameters monitored, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

d. Periods when the closed vent systems and control devices are not operated as designed, including periods when a flare pilot light does not have a flame.

e. Dates of startups and shutdowns of the closed vent systems and control devices.

58.3. **All Equipment**. Record in a log that is kept in a readily accessible location the following information identified below pertaining to all equipment

[40 C.F.R. 60.486(e) and 40 C.F.R 60.486a(e)]

a. A list of identification numbers for equipment subject to the requirements of this subpart.

b. A list of identification numbers for equipment that are designated for no detectable emissions.

c. The signature of the Permittee's owner, operator or designate authorizing the designation of equipment for no detectable emissions. Alternatively, the Permittee may establish a mechanism with the Department that satisfies this requirement.

d. A list of equipment identification numbers for pressure relief devices required for compliance.

e. For compliance tests:

(i) The dates of each compliance test.

(ii) The background level measured during each compliance test

(iii) The maximum instrument reading measured at the equipment during each compliance test.

f. A list of identification numbers for equipment in vacuum service.

g. A list of identification numbers for equipment that is designated as operating in VOC service less than 300 hr/yr, a description of the conditions under which the equipment is in VOC service and rationale supporting the designation that it is in VOC service less than 300 hr/yr.

58.4. **Valves and Pumps**. Record in a log that is kept in a readily accessible location the following information identified below pertaining to all valves and to all pumps:

[40 C.F.R. 60.486(f) and 40 C.F.R 60.486a(f)]

a. A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.

b. A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.

58.5. **Design Criterion**. Record in a log that is kept in a readily accessible location the following information:

[40 C.F.R. 60.486(h), 40 C.F.R. 60.482-2a(d)(5), 40 C.F.R. 60.482-3a(e)(2)]

a. Design criterion for pumps and compressors that indicates failure of a seal system, the fluid barrier, or both and an explanation of the design criterion; and

b. Changes to the design criteria of Condition 58.5.a and the reasons for the changes.

58.6. Record in a log that is kept in a readily accessible location the information and data used to demonstrate that a piece of equipment is not in VOC service.

[40 C.F.R. 60.486(j) and 40 C.F.R 60.486a(j)]

58.7. The provisions of 40 C.F.R. 60.7(b) and (d) do not apply to affected facilities subject to Conditions 56 through 59.

[40 C.F.R. 60.486(k) and 40 C.F.R 60.486a(k)]

59. NSPS GGG/GGGa/VV/VVa Reporting Requirements. Semiannually report to the Administrator, and to the Department in the operating report required by Condition 141:

59.1. The following information, summarized from the information in Condition 58:

[40 C.F.R. 60.487(a)&(c), 40 C.F.R. 60.487(b) - (c), 40 C.F.R. 60.487a(a)&(c)]

a. Process unit identification.

b. For each month during the period covered by the report:

(i) Number of valves for which leaks were detected;

(ii) Number of valves for which leaks were not repaired;

(iii) Number of pumps for which leaks were detected;

(iv) Number of pumps for which leaks were not repaired;

(v) Number of compressors for which leaks were detected;

(vi) Number of compressors for which leaks were not repaired;

(vii) Number of connectors for which leaks were detected;

(viii) Number of connectors for which leaks were not repaired; and

(ix) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

c. Dates of process unit shutdowns that occurred during the reporting period.

d. Report any revisions to any of the following:

[40 C.F.R. 60.487(c)(4), 60.487(b), 60.487a(c)(4), & 60.487a(b)]

(i) Process unit identifications;

(ii) Number of valves subject to the requirements of § 60.482–7 or 60.482-7a, excluding those valves designated for no detectable emissions under the provisions of § 60.482–7(f) or 60.482-7a(f);

(iii) Number of pumps subject to the requirements of § 60.482–2 or 60.482-2a, excluding those pumps designated for no detectable emissions under the provisions of § 60.482–2(e) or 60.482-2a(e) and those pumps complying with § 60.482–2(f) or 60.482-2a(f);

(iv) Number of compressors subject to the requirements of § 60.482–3 or 60.482-3a, excluding those compressors designated for no detectable emissions under the provisions of § 60.482–3(i) or 60.482-3a(i)and those compressors complying with § 60.482–3(h) or 60.482-3a(h).

59.2. Report the results of all performance tests in accordance with 40 C.F.R. 60.8. The provisions of 40 C.F.R. 60.8(d) do not apply to affected facilities subject to the provisions of Conditions 56 through 59 except that notification to the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests must occur.

[40 C.F.R. 60.487(e) and 60.487a(e)]

Petroleum Refinery Wastewater Systems Subject to NSPS Subpart QQQ

60. NSPS Subpart QQQ Standards. The Permittee shall comply with the applicable standards in 40 C.F.R. 60.692-1, to 40 C.F.R. 60.692-7 or 40 C.F.R. 60.693 -1 and 40 C.F.R. 60.693-2 except during periods of startup, shutdown, or malfunction for the affected emission units of the Oily Water Sewer System, EU IDs 105, 106, 108, 109, 118, and 122 – 125 *[TK-04A, TK-04B, TK-96, VU Drains, DDU Drains, TK-723 Bypass Tanks, TK-723, TK-724, and CPI]*.

60.1. **Monitoring of Operations.** The Permittee shall monitor operations as set forth in 40 C.F.R. 60.695.

[18 AAC 50.040(a)(2)(GG)]
[40 C.F.R. 60.692, 60.693, & 60.695 – 60.698]

60.2. **Petroleum Refinery Wastewater Systems**. **Individual Drain Systems**. For EU ID 109 and 118 *[Vacuum Unit Drain System and DDU Drain System]*, the Permittee shall comply with the applicable requirements of either 60.692-2 or 60.693-1.

[18 AAC 50.040(a)(2)(GG)]
[40 C.F.R. 60.692-2 and 60.693-1]

60.3. **Oil-Water Separators.** For EU ID 105, 106, 108, and 122 – 125 *[TK-04A, TK-04B, TK-96, TK-723 Bypass Tanks, TK-723, TK-724, and CPI]*, the Permittee shall comply with the applicable requirements of either 60.692-3 or 60.693-2.

[18 AAC 50.040(a)(2)(GG)]
[40 C.F.R. 60.692-3]

60.4. **Delay of Repair**. The Permittee shall be allowed to delay a repair to a source if the repair is not technically possible without a complete or partial refinery or process unit shutdown, in which case the repair shall occur before the end of the next refinery or process unit shutdown.

[18 AAC 50.040(a)(2)(GG)]
[40 C.F.R. 60.692-6]

60.5. **Performance Test Method Procedures and Compliance Provisions.** The Permittee shall comply with the procedures and provisions required by 40 C.F.R. 60.696 for performance testing and compliance determinations.

[18 AAC 50.040(a)(2)
[40 C.F.R 60.696]

60.6. **Recordkeeping and Reporting**. The Permittee shall maintain the records required by 60.697 and submit the reports required by 60.698 as applicable:

a. The Permittee shall comply with the recordkeeping requirements of 40 C.F.R. 60.697.

b. The Permittee shall comply with the reporting obligations of 40 C.F.R. 60.698 by submitting reports semi-annually to the Administrator and in the operating report required by Condition 141.

[18 AAC 50.040(a)(2)(GG)]
[40 C.F.R. 60.697 and 60.698]

60.7. **Alternative Monitoring Plan for EU IDs 105 and 106**. As allowed under the EPA-approved Alternative Monitoring Plan issued August 25, 1997, the Permittee shall comply with the EPA-approved Alternative Monitoring Provisions for Slop Oil Tanks, EU IDs 105 and 106 [TK-04A and TK-04B].

[US EPA Region X Alternative Monitoring Plan, 8/25/1997]

60.8. **Alternative Monitoring Plan for EU ID 108.** As allowed under the EPA-approved Alternative Monitoring Plan issued December 27, 2003, the Permittee shall comply with the EPA-approved Alternative Monitoring provisions for the oil water surge tank EU ID 108 *[TK-96]*. The alternative monitoring provisions as

provided in detail in the approved Plan allow the Permittee to inspect the wastewater tank, EU ID 108 *[TK-96]* according to the procedures of NSPS Subpart Kb 40 C.F.R. 60.113b(a)(1, 2, 4, & 5).

[USEPA Region X Alternative Monitoring Plan, 12/29/03]
[40 C.F.R. 60.113b(a)(1, 2, 4, & 5) Subpart Kb]

Emission Units/Stationary Sources Subject to Federal National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart A

61. NESHAP Subpart A Control Device Requirements. For EU ID 42 *[J-801]*, the flare used as control device at the Refinery, the Permittee shall comply with 40 C.F.R. 63.11(b)(1) through (b)(5), (b)(6)(ii), and (b)(8) – the same requirements described under Condition 34 – to meet NESHAP Subpart UUU requirements as stated in Condition 73.

[18 AAC 50.040(c)(1)(E)]
[40 C.F.R. 63.1566(a)(1)(i) & (a)(2)]

Benzene Waste Operations Subject to NESHAP 40 C.F.R. 61 Subpart FF

62. NESHAP Subparts A and FF Requirements. The Permittee shall comply with the applicable requirements of Subpart A in accordance with the provisions for applicability to Subpart FF to limit the total annual benzene quantity from stationary source waste to less than 10 megagrams per year (Mg/yr) (11 ton/yr).

[40 C.F.R. 61.11, 61.342(a)(2)-(4), and 61.355(a)-(c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

62.1. Wastes that are exempted from control under 40 C.F.R. 61.342(c)(2) and 61.342(c)(3) are included in the calculation of the total annual benzene quantity if they have an annual average water content greater than 10 percent, or if they are mixed with water or other wastes at any time and the mixture has an annual average water content greater than 10 percent.

62.2. The total annual benzene quantity from stationary source waste is the sum of the annual benzene quantity for each waste stream at the stationary source that has a flow-weighted annual average water content greater than 10 percent or that is mixed with water, or other wastes, at any time and the mixture has an annual average water content greater than 10 percent.

62.3. The benzene quantity in a waste stream is to be counted only once without multiple counting if other waste streams are mixed with or generated from the original waste stream.

62.4. Include in the calculation of the total annual benzene quantity the benzene in a material subject to this condition that is sold if the material has an annual average water content greater than 10 percent.

62.5. Do not include in the calculation of total annual benzene quantity the benzene in wastes generated by remediation activities conducted at the stationary source, such as the excavation of contaminated soil, pumping and treatment of groundwater and the recovery of product from soil or groundwater.

62.6. Include in the calculation of total annual benzene quantity the benzene in wastes generated by remediation activities managed at the stationary source when the remediation waste was generated offsite, if the waste streams have an annual

average water content greater than 10 percent, or if they are mixed with water or other wastes at any time and the mixture has an annual average water content greater than 10 percent.

62.7. The total annual benzene quantity is determined based upon the quantity of benzene in the waste before any waste treatment occurs to remove the benzene.

63. Determine the total annual benzene quantity from stationary source waste by the following procedure:

63.1. For each waste stream subject to this condition having a flow-weighted annual average water content greater than 10 percent water, on a volume basis as total water, or is mixed with water or other wastes at any time and the resulting mixture has an annual average water content greater than 10 percent as specified in Condition 62.2, the owner or operator shall:

a. Determine the annual waste quantity for each waste stream using the procedures specified in Condition 64.

b. Determine the flow-weighted annual average benzene concentration for each waste stream using the procedures specified in Condition 65.

c. Calculate the annual benzene quantity for each waste stream by multiplying the annual waste quantity of the waste stream times the flow-weighted annual average benzene concentration.

63.2. Calculate the total annual benzene quantity from stationary source waste by adding together the annual benzene quantity for each waste stream generated during the year and the annual benzene quantity for each process unit turnaround waste annualized according to Condition 64.1.

63.3. Comply with the recordkeeping requirements in Condition 66; and

63.4. Repeat the determination of total annual benzene quantity from stationary source waste at least once per year and whenever there is a change in the process generating the waste that could cause the total annual benzene quantity from stationary source waste to increase to 10 Mg/yr (11 ton/yr) or more.

63.5. Include in the determination of total annual benzene from stationary source waste the benzene quantity in a waste stream that is generated less than one time per year, except as provided for process unit turnaround waste in Condition 64.1, for the year in which the waste is generated unless the waste stream is otherwise excluded from the determination of total annual benzene quantity from stationary source waste in accordance with Conditions 65 through 68.

64. For purposes of the calculation required by Condition 64.1, determine the annual waste quantity at the point of waste generation or other locations allowed by 61.355(b), unless otherwise provided in Condition 64.1, by one of the methods given in Conditions 64.2 through 64.4.

64.1. Determine the annual quantity of each process unit turnaround waste generated only at 2 year or greater intervals, by either

a. annualizing the waste quantity by dividing the total quantity of waste generated during the most recent process unit turnaround by the time period (in the nearest tenth of a year) between the turnaround resulting in generation of the waste and the most recent preceding process turnaround for the unit. Include the resulting annual waste quantity in the calculation of the annual benzene quantity as provided in Condition 63.1.c for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process turnaround; or

b. not annualizing waste quantity, and including the process unit turnaround waste quantity in the calculation of the annual benzene quantity for the year in which the turnaround occurs.

64.2. Select the highest annual quantity of waste managed from historical records representing the most recent 5 years of operation or, if the stationary source has been in service for less than 5 years but at least 1 year, from historical records representing the total operating life of the facility;

64.3. Use the maximum design capacity of the waste management unit; or

64.4. Use measurements that are representative of maximum waste generation rates.

65. For the purposes of the calculation required by Condition 65.3.e, determine the flow-weighted annual average benzene concentration according to Condition 65.1 using either of the methods given in Conditions 65.2 and 65.3.

65.1. Determine the flow-weighted annual average benzene concentration as follows:

a. At the points of waste generation or other locations allowed by 61.355(c)(1), except determine the flow-weighted annual average benzene concentration for process unit turnaround waste using either of the methods given in Condition 65.2 or 65.3. The resulting flow-weighted annual average benzene concentration for process unit turnaround waste shall be included in the calculation of annual benzene quantity as provided in Condition 63.1.c for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process unit turnaround.

b. Volatilization of the benzene by exposure to air shall not be used in the determination to reduce the benzene concentration.

c. Mixing or diluting the waste stream with other wastes or other materials shall not be used in the determination to reduce the benzene concentration.

d. The determination shall be made prior to any treatment of the waste that removes benzene, except determine the flow-weighted annual average benzene concentration for process unit turnaround waste using either of the methods given in Condition 65.2 or 65.3. The resulting flow-weighted annual average benzene concentration for process unit turnaround waste shall be included in the calculation of annual benzene quantity as provided in Condition 63.1.c for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process unit turnaround.

e. For wastes with multiple phases, the determination shall provide the weighted-average benzene concentration based on the benzene concentration in each phase of the waste and the relative proportion of the phases.

65.2. *Knowledge of the waste.* Provide sufficient information to document the flow-weighted annual average benzene concentration of each waste stream. Examples of information that could constitute knowledge include material balances, records of chemicals purchases, or previous test results provided the results are still relevant to the current waste stream conditions. If test data are used, then the owner or operator shall provide documentation describing the testing protocol and the means by which sampling variability and analytical variability were accounted for in the determination of the flow-weighted annual average benzene concentration for the waste stream. When the Permittee and the Administrator do not agree on determinations of the flow-weighted annual average benzene concentration based on knowledge of the waste, the procedures under Condition 65.3 shall be used to resolve the disagreement.

65.3. Measure the benzene concentration in the waste stream in accordance with the following procedures:

a. Collect a minimum of three representative samples from each waste stream. Where feasible, samples shall be taken from an enclosed pipe prior to the waste being exposed to the atmosphere.

b. For waste in enclosed pipes, the following procedures shall be used:

(i) Collect samples prior to the waste being exposed to the atmosphere in order to minimize the loss of benzene prior to sampling.

(ii) Install a static mixer in the process line or in a by-pass line unless it is demonstrated that the installation of a static mixer in the line is not necessary to accurately determine the benzene concentration of the waste stream.

(iii) Locate the sampling tap within two pipe diameters of the static mixer outlet.

(iv) Purge sample lines and cooling coil prior to the initiation of sampling with at least four volumes of waste.

(v) After purging, direct the sample flow to a sample container with the tip of the sampling tube kept below the surface of the waste during sampling.

(vi) Collect samples at a flow rate such that the cooling coil is able to maintain a waste temperature less than 10° C (50° F).

(vii) After filling, cap the sample container immediately (within 5 seconds) to leave a minimum headspace in the container.

(viii) Immediately cool the sample containers and maintain a temperature below 10° C (50° F) for transfer to the laboratory.

c. When sampling from an enclosed pipe is not feasible, collect a minimum of three representative samples in a manner to minimize exposure of the sample to the atmosphere and loss of benzene prior to sampling.

d. Determining the benzene concentration in a waste stream by analyzing each waste sample using one of the test methods listed in 40 C.F.R. 61.355(c)(3)(iv):

e. Calculate the flow-weighted annual average benzene concentration by averaging the results of the sample analyses using Equation 3:

Equation 3

$$\overline{C} = \frac{1}{Q_t} \times \sum_{i=1}^{n} (Q_i)(C_i)$$

Where

C = Flow-weighted annual average benzene concentration for waste stream, ppmw.
Q_t = Total annual waste quantity for waste stream, kg/yr (lb/yr).
n = Number of waste samples (at least 3).
Qi = Annual waste quantity for waste stream represented by Ci, kg/yr (lb/yr).
Ci = Measured concentration of benzene in waste sample i, ppmw.

66. Recordkeeping. In addition to the recordkeeping requirements of Condition 136, maintain records that identify each waste stream subject to Conditions 62.1 through 65 in a readily accessible location at the site, and indicate whether or not the waste stream is controlled for benzene emissions in accordance with 40 C.F.R. 61, Subpart FF. In addition maintain the following records:

[40 C.F.R. 61.356(a) - (c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

66.1. For each waste stream not controlled for benzene emission, the records shall include all test results, measurements, calculations, and other documentation used to determine the following information for the waste stream: waste stream identification, water content, whether or not the waste stream is a process wastewater stream, annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration and annual benzene quantity.

66.2. Where the annual waste quantity for process unit turnaround waste is determined in accordance with Condition 64.2, the records shall include all test results, measurements, calculations and other documentation used to determine the following information: identification of each process unit at the facility that undergoes turnarounds, the date of the most recent turnaround for each process unit, identification of each process unit turnaround waste, the water content of each process unit turnaround waste, the annual waste quantity determined in accordance with Condition 64.2, the range of benzene concentrations in the

waste, the annual average flow-weighted benzene concentration of the waste and the annual benzene quantity calculated in accordance with Condition 63.1.c.

67. Reporting. On or before April 7 of each calendar year and whenever there is a change in the process generating the waste stream that could cause the total annual benzene quantity from facility waste to increase to 10 Mg/yr (11 ton/yr) or more, submit to the Administrator and the Department a report that updates the information required in the initial startup report required by 40 C.F.R. 61.357(a). If the information required under §61.357(a)(1)-(3) has not changed in the most recent update, a statement to that effect may be submitted.

67.1. List each benzene report submitted under Condition 67 within the operating report required by Condition 141.

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]
[40C.F.R.61.357(a)]

68. Report deviations from Conditions 62 through 66 under Condition 140.

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

68.1. If the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 ton/yr) as determined in Conditions 62.1 through 62.4, the Permittee shall comply with the requirements of 40 C.F.R. 61.342(c) through (h) no later than 90 days following the effective date, unless a waiver of compliance has been obtained under 40 C.F.R. 61.11, or by the initial startup for a new source with an initial startup after the effective date. For an existing source that is unable to comply with the rule within the required time, the Permittee may request a waiver of compliance under 40 C.F.R. 61.10 and in accordance with 40 C.F.R. 61.342(b)(1) and (2).

[18 AAC 50.040 (b)(2)(E)]
[40 C.F.R. 61.342 (a)(1) – (a)(4); 61.342(b)]

69. NESHAP Subpart FF Offsite Waste Treatment Alternative. Rather than treating the waste onsite, the Permittee may elect to comply with 40 C.F.R. 61.342(c)(1)(i) by transferring the waste offsite to another stationary source where the waste is treated in accordance with the requirements of 40 C.F.R. 61.342(c)(1)(i). The Permittee shall:

69.1. Comply with the standards specified in 40 C.F.R. 61.343 through 61.347 for each waste management unit that receives or manages the waste prior to shipment of the waste offsite.

69.2. Include with each offsite waste shipment a notice stating that the waste contains benzene which is required to be managed and treated in accordance with the provisions of this subpart.

[18 AAC 50.040 (b)(2)(E)]
[40 C.F.R. 61.342(c)(1)(i) & (f), 61.343 – 61.347]
[40 C.F.R. 61.357(a) & (c)]

Petroleum Refineries Subject to NESHAP 40 C.F.R. 63 Subpart CC

70. NESHAP Subpart CC Requirements. The Permittee shall comply with the applicable requirements of 40 C.F.R. 63.642 through 63.654 in Subpart CC, the associated equipment

leaks standards and requirements in 40 C.F.R. 60.482 through 60.487 in Subpart VV for affected equipment in organic HAP service as defined in 40 CFR 63.641, and the associated storage vessel provisions in 40 C.F.R. 63.119 through 63.121 and 63.123 in Subpart G for EU IDs 56, 58, 75, 76, 78, 79, 83 – 89, 96 – 100, 102 – 104 and 117 *[TK-10, TK-12, TK-40, TK-41, TK-45, TK-60, TK-61, TK-62, TK-63, TK-64, TK-65, TK-66, Crude Unit, Powerformer, LPG Unit, Hydrocracker, Hydrogen Unit, PRIP Unit, Vacuum Unit, and DDU]*.

70.1. Equipment leaks that are also subject to the provisions of 40 CFR part 60, Subpart GGG, are required to comply only with the provisions specified in 40 CFR Part 63, Subpart CC. Affected equipment in organic HAP service are located only in EU IDs 102, 103, 104, and 117 *[Powerformer, LPG unit, Hydrocracker, Hydrogen Unit, PRIP Unit, Vacuum Unit, and DDU]*.

70.2. Equipment leaks that are also subject to the provisions of 40 CFR Part 60, Subpart GGGa, *[EU ID 96, Crude Unit]*, are required to comply only with the provisions specified in 40 CFR Part 60, Subpart GGGa described under Condition 56.

70.3. The Permittee shall comply with Conditions 57 through 59 for equipment in HAP service.

[18 AAC 50.040(c)(10)]
[40 C.F.R. 63.640(p), 63.642 – 63.654, Subpart CC]
[40 C.F.R. 60.482 – 60.487, Subpart VV]
[40 C.F.R. 63.119 – 63.121 & 63.123, Subpart G]

Site Remediation Subject to NESHAP 40 C.F.R. 63 Subpart GGGGG

71. NESHAP Subpart GGGGG Applicability. The Permittee conducts site remediation, as defined in 40 C.F.R. 63.7957. However, the site remediation activities are not subject to the control requirements of Subpart GGGGG, provided that the Permittee meets the exemption criteria specified in Condition 71.1 and maintains the records specified in Condition 71.2:

[18 AAC 50.040(c)(24)]
[40 C.F.R. 63.7881(a) - (c), Subpart GGGGG]

71.1. Determine the total quantity of the HAP listed in Table 1 of 40 C.F.R. 63, Subpart GGGGG that is contained in the remediation material excavated, extracted, pumped, or otherwise removed during all of the site remediation conducted at the stationary source. Limit the total quantity to less than 1 mega-gram (Mg) annually. This exemption applies the 1 Mg limit on a stationary source-wide, annual basis. There is no restriction to the number of site remediation activities that can be conducted during this period.

71.2. Prepare and maintain at the stationary source, written documentation to support your determination that the total HAP quantity in your remediation materials for the year is less than 1 Mg. The documentation must include a description of your methodology and data used for determining the total HAP content of the remediation.

71.3. Submit a copy of the determination prepared in Condition 71.2 annually to the Department with the compliance certification required by Condition 142.

[18 AAC 50.345(i)]

72. NESHAP Subpart GGGGG, Short Term Remediation. A site remediation that is completed within 30 consecutive calendar days is not subject to the standards under 40 C.F.R. 63.7884(a). This exemption cannot be used for a site remediation involving the staged or intermittent cleanup of remediation material whereby the remediation activities at the site are started, stopped, and then re-started in a series of intervals, with durations less than 30-days per interval, when the time period from the beginning of the first interval to the end of the last interval exceeds 30 days.

72.1. Prepare and maintain at the stationary source written documentation describing the exempted site remediation, and listing the initiation and completion dates for the site remediation.

[18 AAC 50.040(c)(24)]
[40 C.F.R. 63.7884(b), Subpart GGGGG]

Petroleum Refineries Subject to NESHAP 40 C.F.R. 63 Subpart UUU

73. NESHAP Subparts A and UUU General Requirements. For EU IDs 97 and 101 *[Powerformer and SRU]*, the Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart UUU as shown below. For EU IDs 97 and 101 *[Powerformer and SRU]*, the Permittee shall comply with the applicable requirements of Subpart A in accordance with the provisions for applicability as shown in Table 44 of Subpart UUU.

[18 AAC 50.040(c)(1) & (c)(21)]
[40 C.F.R. 63.11(b), Subpart A]
[40 C.F.R. 63.1563(b)]

NESHAPS Subpart UUU Powerformer (EU ID 97) Organic HAP Emissions

74. During initial catalyst depressuring and catalyst pumping operations that occur prior to the coke burn off cycle during a reformer regeneration, vent emissions to a flare that meets the requirements for control devices in Condition 34. Visible emissions from the flare must not exceed a total of 5 minutes during any 2-hour operating period for each process vent.

74.1. Emission limitations do not apply to the coke burn-off, catalyst rejuvenation, reduction or activation vents, or to the control systems used for these vents.

74.2. Emission limitations do not apply to emissions from process vents during depressuring and purging operations when the reactor vent pressure is 5 pounds per square inch gauge (psig) or less

74.3. Install and operate a continuous monitoring device to continuously detect the presence of a pilot light. The flare pilot light must be present at all times and the flare must be operating at all times that emissions may be vented to it.

74.4. Demonstrate continuous compliance with emission limitations by meeting the requirements of Conditions 74 and 74.3 and collecting flare monitoring data according to Condition 88 and recording for each 1-hour period whether the monitor was continuously operating and the pilot light was continuously present during each 1-hour period.

74.5. Demonstrate continuous compliance with the work practice standards by complying with the operation maintenance, and monitoring plan required by Condition 89.1.

[18 AAC 50.040(c)(1) & (c)(21)]
[40 C.F.R. 63.11(b), Subpart A]
[40 C.F.R. 63.1566(a)(1) & (2) & (3) & (4) & (5); 63.1566(b) & (c); 63.1574(f)]

NESHAPS Subpart UUU Powerformer (EU ID 97) Inorganic HAP Emissions

75. The Permittee shall reduce uncontrolled emissions of hydrogen chloride (HC1) from the process vent EU ID 97 *[Powerformer]* to a concentration of 30 ppmv (dry basis), corrected to 3 percent oxygen during coke burn-off and catalyst rejuvenation.

75.1. The internal scrubbing system shall not exceed a daily average HCl concentration of 27 ppmv in the catalyst regenerator exhaust gas as established in the latest[15] performance test.

a. Perform a source test during the first regeneration cycle after the effective date of this permit to verify compliance with the HCl limit of Condition 75.1

75.2. Operate at all times according to the procedures in the plan required by Condition 89.1.

75.3. Use a Colormetric tube sampling system according to the requirements in Condition 88 to measure the HCl concentration in the catalyst regenerator exhaust.

a. Measure and record the concentration of HCl every 4 hours during coke burn-off and catalyst rejuvenation. Calculate the daily average HCl concentration as an arithmetic average of all samples collected in each 24-hour period from the start of the coke burn-off cycle or for the entire duration of the coke burn-off cycle if the coke burn-off cycle is less than 24 hours. Maintain the daily average HCl concentration less than the operating limit of Condition 75.

b. Use a colormetric tube sampling system with a printed numerical scale in ppmv, a standard measurement range of 1 to 30 ppmv, and a standard deviation for measured values of no more than +/- 15 percent.

75.4. Demonstrate continuous compliance with work practice standards by maintaining records to document conformance with the procedures in the operation, maintenance and monitoring plan required by Condition 89.1.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1567(a)(1)-(3), (b)(4), (c)(1) &(c)(2), Subpart UUU]

[15] Source test conducted by Amtest Air Quality, April 17 – 24, 2006 established an operating limit of 27 ppm as reviewed by ADEC March 08, 2007.

NESHAPS Subpart UUU SRU (EU ID 101) HAP Emissions

76. Limit the emission of SO_2 at zero percent excess air to 250 ppmv (dry basis) as required by Condition 35.2.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1568(a), Subpart UUU]

77. Operate at all times according to the procedures in the operation, maintenance, and monitoring plan required by Condition 89.1

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1568(a)(3), Subpart UUU]

78. Demonstrate continuous compliance with emission limitations of Condition 76 by collecting the hourly average SO_2 monitoring data (dry basis, percent excess air) according to Condition 88; maintaining the hourly average SO_2 concentration at or below the applicable limit; determining and recording each 12-hour average SO_2 day concentration; and reporting any 12-hour average SO_2 concentration greater than the applicable emission limitation in the operating report required by Condition 141.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1568(c)(1), Subpart UUU]

79. Demonstrate continuous compliance with the work practice requirements of Condition 77 by maintaining records to document conformance with the procedures in the operation, maintenance and monitoring plan required by Condition 89.1.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1568(c)(2), Subpart UUU]

NESHAPS Subpart UUU Bypass Lines HAP Emissions

80. Install and operate flow indicator to demonstrate continuously whether flow is present in the bypass lines. The flow indicator should be installed at or as near as practical to the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1569(a)(1)(i), Subpart UUU]

81. Operate at all times according to the procedures in the operation, maintenance, and monitoring plan required by Condition 89.1.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1569(a)(3), Subpart UUU]

82. Demonstrate continuous compliance with the work practice standards of Condition 80 by continuously monitoring and recording whether flow is present in the bypass line and recording whether the device is operating properly and whether flow is present in the bypass line.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1569(c)(1), Subpart UUU]

83. Demonstrate continuous compliance with the work practice requirements of Condition 81 by maintaining records to document conformance with the procedures in the operation, maintenance and monitoring plan required by Condition 89.1.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1569(c)(2), Subpart UUU]

NESHAPS Subpart UUU General Compliance Requirements

84. The Permittee must be in compliance with all non-opacity standards of Conditions 73 through 83 at all times except periods of Startup, Shutdown, and Malfunction.

[18 AAC 50.040(c)(21) & (j), and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[40 C.F.R. 63.1570(a), Subpart UUU]

85. The Permittee must be in compliance with the visible emission limits of Conditions 73 through 83 at all times except periods of Startup, Shutdown, and Malfunction.

[18 AAC 50.040(c)(21) & (j), and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[40 C.F.R. 63.1570(b), Subpart UUU]

86. The Permittee must operate and maintain your affected source, including air pollution control and monitoring equipment at all times including during Startup, Shutdown and Malfunction (SSM) events.

[18 AAC 50.040(c)(21) & (j), and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[40 C.F.R. 63.1570(c), Subpart UUU]

87. The Permittee must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to 40 C.F.R. 63.6(e)(3).

87.1. During periods of startup, shutdown, and malfunction, you must operate in accordance with the SSMP plan.

87.2. Report each instance in which the emission limitation was exceeded and each operating limit in this subpart that applies to you. This includes periods of startup, shutdown, and malfunction. Report each instance in which a work practice standard was not met. These instances are deviations from the emission limitations and work practice standards in Subpart UUU. These deviations must be reported according to Condition 140.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1570(d) & (e) & (f), Subpart UUU]

88. Monitoring Installation, Operation, and Maintenance Requirements. Install, operate, and maintain each continuous monitoring system according to the following requirements:

88.1. For Continuous Emission Monitoring System (SO_2 CEMS installed on EU ID 25 *[H-1105]*):

a. Install, operate, and maintain a continuous emission monitoring system according to Condition 35.3.b.

b. As specified in 40 C.F.R. 63.8(c)(4)(ii), the continuous emission monitoring system must complete a minimum of one cycle of operation

(sampling, analyzing, and data recording) for each successive 15-minute period.

c. As specified in 40 C.F.R. 63.8(g)(2), reduce the data to one-hour averages.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1572(a)(1) through (a)(4), Subpart UUU]

d. Monitor and collect data according to the following requirements:

(i) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), conduct all monitoring in continuous operation (or collect data at all required intervals) at all times the affected source is operating.

(ii) Do not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities for purposes of this regulation, including data averages and calculations, for fulfilling a minimum data availability requirement, if applicable. Use all the data collected during all other periods in assessing the operation of the control device and associated control system.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1572(d)(1) through (d)(2), Subpart UUU]

88.2. For Continuous Parametric Monitoring (flare pilot flame thermocouple at EU ID 42 *[J-801]*, and colormetric tube sampling at EU 97 *[Powerformer]*):

a. Install, operate, and maintain each continuous parameter monitoring system according to the following requirements:

(i) Each continuous parameter monitoring system must be installed, operated, and maintained in a manner consistent with the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1572(c)(1) through (c)(5), Subpart UUU]

89. Notifications: submit all of the notifications required by 40 C.F.R. 63.6(h), 63.7(b) and (c), 63.8(e), 63.8(f)(4), 63.8(f)(6), and 63.9(b) through (h) that apply by the dates specified.

89.1. Prepare and implement an operation, maintenance, and monitoring plan for each affected source, control system, and continuous monitoring system. Detail the operation, maintenance, and monitoring procedures.

a. Submit any plan change to the Department for review and approval and comply with the plan until the change is approved.

b. Each plan must include, at a minimum, the following information:

(i) Process and control device parameters to be monitored for each affected source, along with established operating limits.

(ii) Procedures for monitoring emissions and process and control device operating parameters for each affected source.

(iii) Procedures you will use to determine the HCl concentration of gases from a semi-regenerative catalytic reforming unit with an internal scrubbing system (i.e., no add-on control device) when you use a colormetric tube sampling system.

(iv) Procedures you will use to determine the gas flow rate for a catalytic cracking unit if you use the alternative procedure based on air flow rate and temperature.

(v) Quality control plan for the SRU SO_2 CEMS used to meet an emission limit in this subpart. This plan must include procedures you will use for calibrations, accuracy audits, and adjustments to the system needed to meet applicable requirements for the system.

(vi) Maintenance schedule for each affected source, monitoring system, and control device that is generally consistent with the manufacturer's instructions for routine and long-term maintenance.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1574(f) and (f)(1), (f)(2), Subpart UUU]

90. Reports: Submit a compliance report with each facility operating report required by Condition 141.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1575(a), Subpart UUU]

90.1. The compliance report must contain the following information:

a. Company name and address.

b. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

c. Date of report and beginning and ending dates of the reporting period.

d. If there are no deviations from any emission limitation that applies to you and there are no deviations from the requirements for work practice standards, a statement that there were no deviations from the emission limitations or work practice standards during the reporting period and that no continuous emission monitoring system was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1575(c), Subpart UUU]

90.2. For each deviation from an emission limitation and for each deviation from the requirements for work practice standards that occurs at an affected source where a continuous opacity monitoring system or a continuous emission monitoring system is not used to comply with the emission limitation or work practice standard in this subpart, the compliance report must contain the following information:

a. The total operating time of each affected source during the reporting period.

b. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

c. Information on the number, duration, and cause for monitor downtime incidents (including unknown cause, if applicable, other than downtime associated with zero and span and other daily calibration checks).

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1575(d), Subpart UUU]

90.3. For each deviation from an emission limitation occurring at an affected source using a continuous emission monitoring system to comply with the emission limitation, include the following information:

a. The date and time that each malfunction started and stopped.

b. The date and time that each emission monitoring system was inoperative, except for zero (low-level) and high-level checks.

c. The date and time that each continuous emission monitoring system was out-of-control, including the information in 40 C.F.R. 63.8(c)(8).

d. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

e. A summary of the total duration of the deviation during the reporting period (recorded in hours for gases and in the averaging period specified in the regulation for other types of emission limitations), and the total duration as a percent of the total source operating time during that reporting period.

f. A breakdown of the total duration of the deviations during the reporting period and into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

g. A summary of the total duration of downtime for the continuous emission monitoring system during the reporting period (recorded in hours for gases and in the averaging time specified in the regulation for other types of standards), and the total duration of downtime for the continuous emission monitoring system as a percent of the total source operating time during that reporting period.

h. A breakdown of the total duration of downtime for the continuous emission monitoring system during the reporting period into periods that are due to monitoring equipment malfunctions, non-monitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.

i. An identification of each HAP that was monitored at the affected source.

j. A brief description of the process units.

k. The monitoring equipment manufacturer(s) and model number(s).

l. The date of the latest certification or audit for the continuous emission monitoring system.

m. A description of any change in the continuous emission monitoring system, processes, or controls since the last reporting period.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1575(e), Subpart UUU]

91. Include the following information in each compliance report, if applicable.

91.1. A copy of any performance test done during the reporting period on any affected unit. The report may be included in the next semiannual report. The copy must include a complete report for each test method used for a particular kind of emission point tested. For additional tests performed for a similar emission point using the same method, you must submit the results and any other information required, but a complete test report is not required. A complete test report contains a brief process description; a simplified flow diagram showing affected processes, control equipment, and sampling point locations; sampling site data; description of sampling and analysis procedures and any modifications to standard procedures; quality assurance procedures; record of operating conditions during the test; record of preparation of standards; record of calibrations; raw data sheets for field sampling; raw data sheets for field and laboratory analyses; documentation of calculations; and any other information required by the test method.

91.2. Any requested change in the applicability of an emission standard (e.g., you want to change from the HCl concentration standard to percent reduction for catalytic reforming units) in your periodic report. Include all information and data necessary to demonstrate compliance with the new emission standard selected and any other associated requirements.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1575(f), Subpart UUU]

92. You may submit reports required by other regulations in place of or as part of the compliance report if they contain the required information.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1575(g), Subpart UUU]

93. SSM Reporting Requirements:

93.1. When actions taken to respond are consistent with the plan, you are not required to report these events in the semiannual compliance report and the reporting requirements in 40 C.F.R. 63.6(e)(3)(iii) and 63.10(d)(5) do not apply.

93.2. When actions taken to respond are not consistent with the plan, you must report these events and the response taken in the semiannual compliance report. In this case, the reporting requirements in 40 C.F.R. 63.6(e)(3)(iv) and 63.10(d)(5) do not apply.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1575(h), Subpart UUU]

94. Recordkeeping: Keep the records specified by the following:

94.1. A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or Notification of Compliance Status that you submitted, according to the requirements in 40 C.F.R. 63.10(b)(2)(xiv).

94.2. The records in 40 C.F.R. 63.6(e)(1)(iii) through (v) related to startup, shutdown, and malfunction.

94.3. Records of performance tests, performance evaluations, and opacity and visible emission observations as required in 40 C.F.R. 63.10(b)(2)(viii).

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1576(a), Subpart UUU]

95. For each continuous emission monitoring system, keep the following records:

95.1. Records described in 40 C.F.R. 63.10(b)(2)(vi) through (xi).

95.2. Previous (i.e., superseded) versions of the performance evaluation plan as required in 40 C.F.R. 63.8(d)(3).

95.3. Requests for alternatives to the relative accuracy test for continuous emission monitoring systems as required in 40 C.F.R. 63.8(f)(6)(i).

95.4. Records of the date and time that each deviation started and stopped and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1576(b), Subpart UUU]

96. Keep the records in 40 C.F.R. 63.6(h) for visible emission observations.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1576(c), Subpart UUU]

97. Keep records required by Tables 20, 21, 27 and 28 of Subpart UUU (for catalytic reforming units); Tables 34 and 35 of Subpart UUU (for sulfur recovery units); and Table 39 of Subpart UUU (for bypass lines) to show continuous compliance with each emission limitation that applies.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1576(d), Subpart UUU]

98. Keep a current copy of your operation, maintenance, and monitoring plan onsite and available for inspection. Keep records to show continuous compliance with the procedures in your operation, maintenance, and monitoring plan.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1576(e), Subpart UUU]

99. Keep the records of any changes that affect emission control system performance.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1576(f), Subpart UUU]

100. Records must be in a form suitable and readily available for expeditious review according to 40 C.F.R. 63.10(b)(1).

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1576(g), Subpart UUU]

101. As specified in 40 C.F.R. 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1576(h), Subpart UUU]

102. Keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. 63.10(b)(1). You can keep the records offsite for the remaining 3 years.

[18 AAC 50.040(c)(21)]
[40 C.F.R. 63.1576(i), Subpart UUU]

Stationary Reciprocating Internal Combustion Engines (RICE) Subject to NESHAPs 40 C.F.R. 63 Subpart ZZZZ, EU-ID 34 through 41 (*EG704, EG801, P-605A, P-605B, P-708A, P-708B, P-708C and P719C*)

103. **General Compliance**: The Permittee must be in compliance with the applicable provisions of 40 C.F.R. 63 Subpart ZZZZ and the applicable provisions of Subpart A as defined in Table 8 of the 40 C.F.R. 63 Subpart ZZZZ. For EU ID 38 and 39 *[P-708A and P-708B]* compliance is required no later than May 3, 2013. For EU 41 *[P-719C]* compliance is required no later than October 19, 2013.

103.1. Comply with the applicable emissions limitations and operating limitations at all times. At all times operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 C.F.R. 63.6605(a) and (b), 63.6665, 63.6590(b)(3)(iii) and Table 8 of Subpart ZZZZ]

104. NESHAP Subpart A and ZZZZ Emergency Engines.

104.1. The following operating time limits for EU IDs 34, 35, and 38 through 41*[EG-704, EG-801, P-708A, P-708B, P-708C and P-719C]* are necessary to maintain classification as a emergency engine under Subpart ZZZZ:

a. There is no time limit in emergency situations,

b. May be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing is limited to 100 hours per calendar year.

c. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

d. May be operated up to 50 hours per calendar year in non-emergency situations, but those hours shall be counted towards the 100 hours per calendar year provided for in Condition 104.1.b.

e. The 50 hours per calendar year of non-emergency usage may not be used for peak shaving or to generate income for a stationary source to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

f. If you do not operate the engine according to the requirements in Conditions 104.1.a through 104.1.e, the engine will not be considered an emergency engine under Subpart ZZZZ and will need to meet all Subpart ZZZZ requirements for non-emergency engines as applicable.

[40 C.F.R. 63.6640(f), Subpart ZZZZ]

104.2. Monitor EU IDs 38, 39, and 41 *[P-708A, P-708B, and P-719C]* using a non-resettable hour meter at all times that the emission unit is operating except for monitor malfunctions, associated repairs, and required quality assurance or control activities.

[40 C.F.R. 63.6625(f), §63.6635(b), Subpart ZZZZ]

104.3. For EU 38, 39 and 41 *[P-708A, P-708B and P-719C]* operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[40 C.F.R. 63.6625(e), Subpart ZZZZ]

105. NESHAP Subpart ZZZZ 4SRB Engines Emissions and Operating Limitations. For EU IDs 36 and 37 *[P-605A and P-605B]*, existing 4SRB stationary RICE, the Permittee shall, at all times, comply with the following:

105.1. Except during periods of startup, reduce formaldehyde emissions by 76 percent or more or limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2.

105.2. During periods of startup, minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of

the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply[16].

105.3. Except during periods of startup, maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.

[18 AAC 50.040(c)(23)]
[40 C.F.R. 63.6600(a); Tables 1a and 1b, Subpart ZZZZ]

106. Performance Test. For EU IDs 36 and 37 *[P-605A and P-605B]*, and only if complying with the formaldehyde concentration limit rather than the formaldehyde percent reduction limit the Permittee shall conduct performance tests according to the applicable procedures in 40 C.F.R. 63.6620 and Table 3 and 4. After two consecutive semiannual tests have demonstrated compliance, the Permittee may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the formaldehyde concentration emission limitation or if the Permittee deviated from the operating limitations in Condition 105, the Permittee shall resume semiannual performance tests. After demonstrating compliance for two consecutive tests, the frequency of subsequent performance tests can be reduced to annually.

[18 AAC 50.040(c)(23)]
[40 C.F.R. 63.6620; Tables 3 & 4, Subpart ZZZZ**]**

106.1. **Notification Requirements.** Submit applicable notifications as follows:

a. All of the applicable notifications in 40 C.F.R. 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) by the dates specified;

[18 AAC 50.040(c)(23)]
[40 C.F.R. 63.6645(a), (g), & (h), Subpart ZZZZ]

106.2. **Monitoring.** Monitor and demonstrate continuous compliance with the emissions and operational limitations in Condition 103, as follows:

[18 AAC 50.040(c)(23)]
[40 C.F.R. 63.6605, 6625, 6635, & 6640; Tables 5.4 & 6.4, Subpart ZZZZ]

a. Install, operate, and maintain each continuous parameter monitoring system (CPMS) required in 40 C.F.R. 63.6625(b) and Table 5.4, according to the requirements in 40 C.F.R. 63.8 as applicable. Demonstrate continuous compliance by:

(i) collecting the catalyst inlet temperature data according to 40 C.F.R. 63.6625(b);

(ii) reducing these data to 4-hour rolling averages;

(iii) maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and

[16] The Permittee can petition the Administrator pursuant to the requirements of 40 C.F.R. 63.6(g) for alternative work practices.

(iv) measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

[40 C.F.R. 63.6625(b), 63.6640(a); Tables 5.4 & 6.4, Subpart ZZZZ]

b. Monitor and collect data continuously at all times that the stationary RICE is operating, except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments). Do not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. However, use all the valid data collected during all other periods.

[40 C.F.R. 63.6635(b) & (c), Subpart ZZZZ]

106.3. **Recordkeeping.** Keep records of the following:

a. A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in 40 C.F.R. 63.10(b)(2)(xiv);

b. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment;

c. Records of performance tests and performance evaluations as required in 40 C.F.R. 63.10(b)(2)(viii);

d. Records of all required maintenance performed on the air pollution control and monitoring equipment; and

e. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 C.F.R. 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation;

f. For each CPMS, you must keep the following records:

(i) Records described in 40 C.F.R. 63.10(b)(2)(vi) through (xi);

(ii) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in 40 C.F.R. 63.8(d)(3); and

(iii) Requests for alternatives to the relative accuracy test for CPMS as required in 40 C.F.R. 63.8(f)(6)(i), if applicable.

g. Keep the records required in Condition 106.2.a.

h. Keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. 63.10(b)(1).

[18 AAC 50.040(c)(23)]
[40 C.F.R. 63.6655(a) - (d) & 63.6660, Subpart ZZZZ]

106.4. **Reporting.** Submit with each report required by Condition 141:

a. Unless the Administrator has approved a different schedule for submission of reports under 40 C.F.R. 63.10(a), submit the following reports.

b. The Compliance report must contain the following information:

(i) Company name and address.

(ii) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with Condition 106.3.e, including actions taken to correct a malfunction.

(v) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(vi) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

c. For each deviation from an emission or operating limitation occurring for a stationary RICE where a CMS is used to comply with the emission and operating limitations in this subpart, include information in Conditions 106.4.b(i) through 106.4.b(iv) and:

(i) The date and time that each malfunction started and stopped.

(ii) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(iii) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(v) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(vii) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(viii) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(ix) A brief description of the stationary RICE.

(x) A brief description of the CMS.

(xi) A description of any changes in CMS, processes, or controls since the last reporting period

d. The date of the latest CMS certification or audit Conditions 106.4.c(i) through 106.4.c(xi).

e. Report all deviations as defined in this subpart in the semiannual monitoring report required by Condition 141. If the Permittee submits a Compliance report pursuant to Condition 106.4.b along with, or as part of, the semiannual monitoring report required by Condition 141, and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the Department.

[18 AAC 50.040(c)(23)]
[40 C.F.R. 63.6650(a) - (c), (e), & (f); Table 7, Subpart ZZZZ]

106.5. **Work Practices**: For EU IDs 38, 39 and 41 *[P-708A, P708B and P-719C]* comply with the following:

a. Change the oil and filter every 500 hours of operation or annually, whichever comes first or utilize an oil analysis program as described in 63.6625(i) in order to extend the specified oil change requirement;

b. Inspect the air cleaner (EU ID 38 and 39 only) or the spark plugs (EU ID 41 only) every 1,000 hours of operation or annually, whichever comes first; and

c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

[40 C.F.R. 63.6640(a) and Table 2c of Subpart ZZZZ]

106.6. If any of EU IDs 38, 39 or 41 *[P-708A, P708B and P-719C]* are operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required by Condition 106.5, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice required by Condition 106.5 should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated.

106.7. **Recordkeeping:** Keep records of maintenance to demonstrate that the engines and after-treatment control device (if any) are operated and maintained according to Conditions 105 and 106.5. These records must include, at a minimum: oil and filter change dates and corresponding hour on the hour meter; inspection and replacement dates for air cleaners, hoses, and belts; and records of other emission-related repairs and maintenance performed.

[40 C.F.R. 63.6655(d) & (e), 75 FR 9654, Subpart ZZZZ]

a. keep records of the hours of operation, including:

(i) the number of hours spent for emergency operation and what classified the operation as an emergency; and

(ii) the number of hours spent for non-emergency operation.

[40 C.F.R. 63.6655(f), Subpart ZZZZ]

106.8. **Reporting:** Report under Condition 140 any deviation from the limitations in Condition 106.5.

[18 AAC 50.040(j)(4) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[40 C.F.R. 63.6650(f), Subpart ZZZZ]

Compliance Assurance Monitoring (CAM) Requirements, 40 C.F.R. 64

107. The Permittee shall maintain and comply with the continuous monitoring scheme set out in CAM in Section 13, developed for EU ID 45 *[LTF SVE]* to assure compliance with Condition 19.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[40 C.F.R. 64.2 – 64.5, CAM]

Risk Management Plan (RMP) Requirements, 40 C.F.R. 68

108. RMP Requirements. The Permittee shall submit a single RMP that includes the information required by 40 C.F.R. 68.155 through 68.185 for all covered processes. The RMP shall be submitted in the method and format to the central point specified by EPA as of the date of submission. The Permittee shall revise and update the RMP submitted in accordance with 40 C.F.R. 68.190[17].

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[40 C.F.R. 68.150 – 68.195, RMP]

[17] As of issuance date of this permit, the most recent RMP was updated and submitted to the EPA on June 17, 2009.

General Conditions

Standard Terms and Conditions

109. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

[18 AAC 50.326(j)(3), 50.345(a) & (e)]

110. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[18 AAC 50.326(j)(3), 50.345(a) & (f)]

111. The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.326(j)(3), 50.345(a) & (g)]

112. Administration Fees. The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-405.

[18 AAC 50.326(j)(1), 50.400, 50.403, & 50.405]
[AS 37.10.052(b), 11/04; AS 46.14.240, 6/7/03]

113. Assessable Emissions. The Permittee shall pay to the Department annual emission fees based on the portion of permitted activity for the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities 10 tons per year or greater . The quantity for which fees will be assessed is the lesser of:

113.1. the portion of the stationary source's assessable potential to emit of 2,587 TPY; or

113.2. the portion of permitted activity for the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon credible evidence of actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by the most representative of one or more of the following methods:

a. an enforceable test method described in 18 AAC 50.220;

b. material balance calculations;

c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or

d. other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided.

[18 AAC 50.040(j)(3), 50.035, 50.326(j)(1), 50.346(b)(1), 50.410, & 50.420]
[40 C.F.R. 71.5(c)(3)(ii)]

114. Assessable Emission Estimates. Emission fees will be assessed as follows:

114.1. no later than March 31 of each year, the Permittee may submit an estimate of the portion of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Ste 303, PO Box 111800, Juneau, AK 99801-1800; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or

114.2. if no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in Condition 113.1.

[18 AAC 50.040(j)(3), 50.326(j)(1), 50.346(b)(1), 50.410, & 50.420]
[40 C.F.R. 71.5(c)(3)(ii)]

115. Good Air Pollution Control Practice. The Permittee shall do the following for EU IDs 1, 12, 14 – 16, 30, 31, 34, 35, 38 – 41, 43, 48 – 51, 58, 61 – 69, 71 – 74, 90, 91, 94, 95, and 119 *[H-101A, H-609, H-650, H-701, H-702, E-1400, E-1410, EG-704, EG-801, P-605A, P- 708A, P-708B, P-708C, P-719C, SRU, AS1320, TK-03, TK-04D, TK-05, TK-12, TK-20, TK-22, TK-23, TK-24, TK-25, TK-30, TK-31, TK-32, TK-33, TK-35, TK-36, TK-37, TK-39, TK-70, TK-80, TK-97 TK-V-1400, and H-1801]*:

115.1. perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;

115.2. keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and

115.3. keep a copy of either the manufacturer's or the operator's maintenance procedures.

115.4. EU IDs 38, 39, and 41 are subject to this condition only until the compliance date set out in Condition 104.1

[18 AAC 50.030, 50.326(j)(3), & 50.346(b)(5)]

116. Dilution. The Permittee shall not dilute emissions with air to comply with this permit. Monitoring shall consist of an annual certification that the Permittee does not dilute emissions to comply with this permit.

[18 AAC 50.045(a)]

117. Reasonable Precautions to Prevent Fugitive Dust. A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.

[18 AAC 50.045(d), 50.040(e), 50. 326(j)(3), & 50.346(c)]

117.1. The Permittee shall keep records of

a. complaints received by the Permittee and complaints received by the Department and conveyed to the Permittee; and

b. any additional precautions that are taken

(i) to address complaints described in Condition 117.1 or to address the results of Department inspections that found potential problems; and

(ii) to prevent future dust problems.

117.2. The Permittee shall report according to Condition 119.

118. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, except as authorized by a construction permit, Title V permit, or air quality control permit issued before October 1, 2004.

[18 AAC 50.055(g)]

119. Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 50.040(e), 50.326(j)(3) & 50.346(a)]
[40 C.F.R. 71.6(a)(3)]

119.1. Monitoring, Recordkeeping, and Reporting for Condition 119:

a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 140.

b. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 119.

119.2. The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if:

a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 119; or

b. the Department notifies the Permittee that it has found a violation of Condition 119.

119.3. The Permittee shall keep written records of:

a. the date, time, and nature of all emissions complaints received;

b. the name of the person or persons that complained, if known;

c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 119; and

d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

119.4. With each stationary source operating report under Condition 141, the Permittee shall include a brief summary report which must include:

a. the number of complaints received;

b. the number of times the Permittee or the Department found corrective action necessary;

c. the number of times action was taken on a complaint within 24 hours; and

d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.

119.5. The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint by submitting the report as set forth in Condition 140.

120. Technology-Based Emission Standard. If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard[18] listed in Conditions 12 through 16, 35, 38 through 60, 70, 73, and 104.3, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under Condition 140 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 140.

[18 AAC 50.235(a), 50.326(j)(4) & 50.040(j)(4)]
[40 C.F.R. 71.6(c)(6)]

121. Asbestos NESHAP. The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.148, 61.150, 61.152, and 61.156 of Subpart M, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(1) & (2)(F), & 50.326(j)]
[40 C.F.R. 61, Subparts A & M, and Appendix A]

NESHAPs Applicability Determinations

122. The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 C.F.R. 63) in accordance with the procedures described in 40 C.F.R. 63.1(b) and 63.10(b)(3). If a source becomes affected by an applicable subpart of 40 C.F.R. 63, the Permittee shall comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 C.F.R. 63.6(c).

122.1. After the effective date of any relevant standard promulgated by the Administrator under this part, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator and the Department of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in 40 C.F.R. 63.9(b).

[18] *Technology-based emission standard* means a best available control technology standard (BACT); a lowest achievable emission rate standard (LAER); a maximum achievable control technology standard established under 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

[18 AAC 50.040(c)(1), 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii)]
[40 C.F.R. 63.1(b), 63.5(b)(4), 63.6(c)(1), & 63.10(b)(3)]

123. Protection of Stratospheric Ozone, 40 C.F.R. 82 40 C.F.R. 82

Subpart F – Recycling and Emissions Reduction

123.1. **Refrigerant Recycling and Disposal.** The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.

[18 AAC 50.040(d) & 50.326(j)]
[40 C.F.R. 82, Subpart F]

Subpart G – Significant New Alternatives Policy

123.2. The Permittee shall comply with the applicable prohibitions set out in 40 C.F.R. 82.174 (Protection of Stratospheric Ozone Subpart G – Significant New Alternatives Policy Program).

[18 AAC 50.040(d)]
[40 C.F.R. 82 Subpart G, 82.174 (b) - (d)]

Subpart H – Halon Emissions Reduction

123.3. The Permittee shall comply with the applicable prohibitions set out in 40 C.F.R. 82.270 (Protection of Stratospheric Ozone Subpart G – Halon Emission Reduction).

[18 AAC 50.040(d)]
[40 C.F.R. 82 Subpart H, 82.270 (b)-(f)]

Open Burning Requirements

124. Open Burning. If the Permittee conducts open burning at this stationary source, the Permittee shall comply with the requirements of 18 AAC 50.065.

124.1. The Permittee shall keep written records to demonstrate that the Permittee complies with the limitations in this condition and the requirements of 18 AAC 50.065. Upon request by the Department, submit copies of the records.

124.2. Compliance with this condition shall be an annual certification conducted under Condition 142.

[18 AAC 50.065, 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)(3)]

125. Firefighter Training: Fuel Burning. Conduct firefighter training in accordance with 50.065(i).

[18 AAC 50.065, 50.040(j), & 50.326(j)]

Section 5. General Source Testing and Monitoring Requirements

126. Requested Source Tests. In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a) & 50.345(a) & (k)]

127. Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

[18 AAC 50.220(b)]

127.1. at a point or points that characterize the actual discharge into the ambient air; and

127.2. at the maximum rated burning or operating capacity of the emission unit or another rate determined by the Department to characterize the actual discharge into the ambient air.

128. Reference Test Methods. The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

128.1. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.220(c)(1)(A) & 50.040(a)]
[40 C.F.R. 60]

128.2. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b) & 50.220(c)(1)(B)]
[40 C.F.R. 61]

128.3. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c) & 50.220(c)(1)(C)]
[40 C.F.R. 63]

128.4. Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9 and may use the form in Section 10 to record data.

[18 AAC 50.030 & 50.220(c)(1)(D)]

128.5. Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(3) & 50.220(c)(1)(E)]
[40 C.F.R. 60, Appendix A]

128.6. Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.

[18 AAC 50.035(b)(2) & 50.220(c)(1)(F)]
[40 C.F.R. 51, Appendix M]

128.7. Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

[18 AAC 50.040(c)(24) & 50.220(c)(2)]
[40 C.F.R. 63, Appendix A, Method 301]

129. Excess Air Requirements. To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific emission unit type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3) & 50.990(102)]

130. Test Exemption. The Permittee is not required to comply with Conditions 132, 133 and 134 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.1) or Smoke/No Smoke Plan (Condition 2.2).

[18 AAC 50.345(a)]

131. Test Deadline Extension. The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.

[18 AAC 50.345(a) & (l)]

132. Test Plans. Except as provided in Condition 130, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the emission unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 126 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be performed without resubmitting the plan.

[18 AAC 50.345(a) & (m)]

133. Test Notification. Except as provided in Condition 130, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.

[18 AAC 50.345(a) & (n)]

134. Test Reports. Except as provided in Condition 130, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the Source Test Report Outline, adopted by reference in 18 AAC 50.030. The Permittee shall additionally certify the results in the manner set out in Condition 137. If requested in

writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

[18 AAC 50.345(a) & (o)]

135. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in Conditions 6 and 24.2, the three-hour average is determined using the average of three one-hour test runs. The source testing must account for those emissions caused by soot blowing, grate cleaning, or other routine maintenance activities by ensuring that at least one test run includes the emissions caused by the routine maintenance activity and is conducted under conditions that lead to representative emissions from that activity. The emissions must be quantified using the following equation:

$$E = E_M\left[(A+B)\times\frac{S}{R\times A}\right]+E_{NM}\left[\frac{R-S}{R}-B\times\frac{S}{R\times S}\right]$$

Where:

E	=	the total PM emissions of the emission unit in grains per dry standard cubic foot ((gr.)/dscf)
$\mathbf{E_M}$	=	the PM emissions in (gr.)/dscf measured during the test that included the routine maintenance activity
$\mathbf{E_{NM}}$	=	the arithmetic average of PM emissions in (gr.)/dscf measured during the test runs that did not include the maintenance activity
A	=	the period of routine maintenance activity occurring during the test run that included routine maintenance activity, expressed to the nearest hundredth of an hour
B	=	the total period of the test run, less A
R	=	the maximum period of emission unit operation per 24 hours, expressed to the nearest hundredth of an hour
S	=	the maximum period of routine maintenance activity per 24 hours, expressed to the nearest hundredth of an hour

[18 AAC 50.220(f)]

Section 6. General Recordkeeping and Reporting Requirements

Recordkeeping Requirements

136. Recordkeeping Requirements. The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

[18 AAC 50.326(j)]
[40 C.F.R 60.7(f), Subpart A, 40 C.F.R 71.6(a)(3)(ii)(B)]

136.1. Copies of all reports and certifications submitted pursuant to this section of the permit; and

136.2. Records of all monitoring required by this permit, and information about the monitoring including:

a. the date, place, and time of sampling or measurements;

b. the date(s) analyses were performed;

c. the company or entity that performed the analyses;

d. the analytical techniques or methods used;

e. the results of such analyses; and,

f. the operating conditions as existing at the time of sampling or measurement.

Reporting Requirements

137. Certification. The Permittee shall certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: *"Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete."* Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.

137.1. The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if

a. a certifying authority registered under AS 09.80.020 verifies that the electronic signature is authentic; and

b. the person providing the electronic signature has made an agreement, with the certifying authority described in Condition 137.1.a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

[18 AAC 50.345(a) & (j), 50.205, & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)(A)]

138. Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall submit one copy of each report, compliance certification, and/or other submittal required by this permit, certified in accordance with Condition 137, to ADEC, Air Permits

Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The documents may be submitted either by hard copy or electronically..

138.1. Electronic submittals may be provided, upon consultation with the Compliance Technician or Department website regarding software compatibility, as follows:

a. send by E-mail under a cover letter using dec.aq.airreports@alaska.gov; or

b. use the Department's Air Online Services at http://dec.alaska.gov/applications/air/airtoolsweb/.

[18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)(A)]

139. Information Requests. The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal Administrator.

[18 AAC 50.345(a) & (i), 50.200, & 50.326(a) & (j)]
[40 C.F.R. 71.5(a)(2) & 71.6(a)(3)]

140. Excess Emissions and Permit Deviation Reports.

140.1. Except as provided in Condition 119, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report

(i) emissions that present a potential threat to human health or safety; and

(ii) excess emissions that the Permittee believes to be unavoidable;

b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or non-routine repair that causes emissions in excess of a technology based emission standard;

c. report all other excess emissions and permit deviations

(i) within 30 days of the end of the month in which the emissions or deviation occurs, except as provided in Conditions 140.1.c(ii) and 140.1.c(iii);

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 140.1.c(i); and

(iii) for failure to monitor, as required in Conditions 4.2.b and 8.1.b.

140.2. When reporting excess emissions or permit deviations, the Permittee must report using either the Department's on-line form, which can be found at http://www.dec.state.ak.us/air/ap/site.htm or https://myalaska.state.ak.us/deca/air/airtoolsweb/, or if the Permittee prefers, the form contained in 0 of this permit. The Permittee must provide all information called for by the form that is used.

140.3. If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.235(a)(2), 50.240(c), 50.326(j)(3), & 50.346(b)(2) & (3)]

141. Operating Reports. During the life of this permit[19], the Permittee shall submit to the Department an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

141.1. The operating report must include all information required to be in operating reports by other conditions of this permitt, for the period covered by the report.

141.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 141.1, the Permittee shall identify

a. the date of the deviation;

b. the equipment involved;

c. the permit condition affected;

d. a description of the excess emissions or permit deviation; and

e. any corrective action or preventive measures taken and the date(s) of such actions; or

141.3. When excess emissions or permit deviations have already been reported under Condition 140 the Permittee shall cite the date or dates of those reports.

141.4. The operating report must include a listing of emissions monitored under Conditions 2.1.e and 2.2.c which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report.

a. the date of the emissions;

b. the equipment involved;

c. the permit condition affected; and

d. the monitoring result which triggered the additional monitoring.

141.5. **Transition from expired to renewed permit**. For the first period of this renewed operating permit, also provide the previous permit's facility operating

[19] *Life of this permit* is defined as the permit effective dates, including any periods of reporting obligations that extend beyond the permit effective dates. For example if a permit expires prior to the end of a calendar year, there is still a reporting obligation to provide operating reports for the periods when the permit was in effect.

report elements covering that partial period immediately preceding the effective date of this renewed permit.

[18 AAC 50.346(a) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)(A)]

142. Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report. The Permittee, at their discretion, may submit one copy in electronic format (PDF or other Department compatible image format).

142.1. Certify the compliance status of the stationary source over the preceding calendar year consistent with the monitoring required by this permit, as follows:

a. identify each term or condition set forth in Section 3 through Section 8, that is the basis of the certification;

b. briefly describe each method used to determine the compliance status;

c. state whether compliance is intermittent or continuous; and

d. identify each deviation and take it into account in the compliance certification;

142.2. **Transition from expired to renewed permit**. For the first period of this renewed operating permit, also provide the previous permit's annual compliance certification report elements covering that partial period immediately preceding the effective date of this renewed permit.

142.3. In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.205, 50.345(a) & (j), & 50.326(j)]
[40 C.F.R. 71.6(c)(5)]

143. NSPS and NESHAP Reports. The Permittee shall:

143.1. **Reports:** Attach to the facility operating report required by Condition 141, for the period covered by the report, a copy of each NSPS and NESHAPs report and notification submitted to the U.S. Environmental Protection Agency (EPA) Region 10; and

143.2. **Waivers:** Upon request by the Department, provide a written copy of any EPA granted alternative monitoring protocol requirement, custom monitoring schedule or waiver of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements. The Permittee shall keep a copy of each U.S. EPA issued monitoring waiver or custom monitoring schedule with the permit.

[18 AAC 50.326(j)(4) & 50.040(j)]
[40 C.F.R. 60.13, 63.10(d and f), and 71.6(c)(6)]

144. Emission Inventory Reporting. The Permittee shall submit to the Department reports of actual emissions, by emission unit, of CO, NH_3, NO_X, PM_{10}, $PM_{2.5}$, SO_2, VOCs and Lead (Pb) (and lead compounds) using the form in Section 12 of this permit, as follows:

144.1. Each year by April 30, since the stationary source's potential to emit for the previous calendar year equals or exceeds:

a. 250 tons per year (TPY) of NH_3, PM_{10}, $PM_{2.5}$ or VOCs; or

b. 2500 TPY of CO, NO_X or SO_2.

144.2. Every third year by April 30 if the stationary source's potential to emit for the previous calendar year equals or exceeds:

a. 5 tons per year of lead (Pb), or

b. 1000 TPY of CO; or

c. 100 TPY of SO_2, NH_3, PM_{10}, $PM_{2.5}$, NO_X or VOCs.

144.3. For reporting under Condition 144, the Permittee shall report in 2015 for calendar year 2014, 2018 for calendar year 2017, 2021 for calendar year 2020, etc., in accordance with the Environmental Protection Agency set schedule.

144.4. Include in the report required by this condition, the required data elements contained within the form in Section 12 or those contained in Table 2A of Appendix A to Subpart A of 40 C.F.R. 51 for each stack associated with an emission unit.

[18 AAC 50.346(b)(8) and 18 AAC 50.200]
[40 C.F.R. 51.15, 51.30(a)(1) & (b)(1)]
[40 C.F.R. 51, Appendix A to Subpart A, 73 FR 76556 (12/17/08)]

Section 7. Permit Changes and Renewal

145. Permit Applications and Submittals. The Permittee shall comply with the following requirements for submitting application information to the EPA Region 10:

145.1. The Permittee shall provide a copy of each application for modification or renewal of this permit, including any compliance plan, or application addenda, at the time the application or addendum is submitted to the Department[20];

145.2. The information shall be submitted to EPA at the same address as in Condition 142.3.

145.3. To the extent practicable, the Permittee shall provide to EPA applications in portable document format (PDF); MS Word format (.doc); or other computer-readable format compatible with EPA's national database management system; and

145.4. The Permittee shall maintain records as necessary to demonstrate compliance with this condition.

[18 AAC 50.040(j)(7) & 50.326(b)]
[40 C.F.R. 71.10(d)(1)]

146. Off Permit Changes. The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 C.F.R. Part 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision, provided that the following requirements are met:

146.1. Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;

146.2. Provide contemporaneous written notice to EPA and the Department of each such change, except for changes that qualify as insignificant under 18 AAC 50.326(d) – (i). Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change;

146.3. The change shall not qualify for the shield under 40 C.F.R. 71.6(f);

146.4. The Permittee shall keep a record describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(12)]

147. Operational Flexibility. The Permittee may make changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions):

[20] The documents required in Condition 145.1 are submitted to the Department's Anchorage office. The current address for the Anchorage office is: ADEC, 619 East Ship Creek Avenue, Suite 249, Anchorage, AK 99501.

147.1. The Permittee shall provide EPA and the Department with a notification no less than 7 days in advance of the proposed change.

147.2. For each such change, the written notification required above shall include a brief description of the change within the permitted stationary source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

147.3. The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 147.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(13)]

148. Permit Renewal. To renew this permit, the Permittee shall submit an application under 18 AAC 50.326 **no sooner than April 15, 2016** and **no later than April 15, 2017**. The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 C.F.R. 71.7(b) and 71.5(a)(1)(iii).

[18 AAC 50.040(j)(3), 50.326(c)(2) & (j)(2)]
[40 C.F.R. 71.5(a)(1)(iii) & 71.7(b) & (c)(1)(ii)]

Section 8. Compliance Requirements

General Compliance Requirements

149. Compliance with permit terms and conditions is considered to be compliance with those requirements that are

149.1. included and specifically identified in the permit; or

149.2. determined in writing in the permit to be inapplicable.

[18 AAC 50.326(j)(3) & 50.345(a) & (b)]

150. The Permittee must comply with each permit term and condition.

150.1. For applicable requirements with which the stationary source is in compliance, the Permittee will continue to comply with such requirements

150.2. Noncompliance with a permit term or condition constitutes a violation of AS 46.14.120(c), 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

a. an enforcement action;

b. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

c. denial of an operating permit renewal application.

[18 AAC 50.040(j), 326(j) & 50.345(a) & (c)]
[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(A)]

151. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.326(j)(3) & 50.345(a) & (d)]

152. The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

152.1. enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;

152.2. have access to and copy any records required by the permit;

152.3. inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

152.4. sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.326(j)(3) & 50.345(a) & (h)]

Section 9. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the permit application, this section of the permit contains the requirements determined by the Department not to be applicable to the stationary source.

153. Nothing in this permit shall alter or affect the following:

153.1. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; or

153.2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance.

[18 AAC 50.326(j)]
[40 C.F.R. 71.6(f)(3)(i)) & (ii)]

154. Table G identifies the emission units that are not subject to the specified requirements at the time of permit issuance. If any of the requirements listed in Table G becomes applicable during the permit term, the Permittee shall comply with such requirements on a timely basis including, but not limited to, providing appropriate notification to EPA, obtaining a construction permit and/or an operating permit revision.

[18 AAC 50.326(j)]
[40 C.F.R. 71.6(f)(1)(ii)]

Table G - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
42	Under 40 C.F.R. 60 Subpart A: 60.18(c)(4)(i) – (iii) 60.18(f)(5)	Applies only to steam-assisted and non-assisted flares. Stationary source operates an air-assisted flare.
Stationary Source-Wide	18 AAC 50.055(d)(1) Under 40 C.F.R. 60 Subpart J: 60.102; 60.103; 60.104(b) – (d); 60.105(a)(1), (2), (8) – 13; 60.105(c), (d),(e)(1) & (2); 60.106(b) - (d), (g) – (k); 60.107(a) – (d); and 60.108	Stationary source does not operate a fluid catalytic cracking unit.
	40 C.F.R. 60.105(a)(3) & (e)(3)(i)	Stationary source meets the requirements has elected to monitor H_2S instead of SO_2 and therefore does not have to meet the SO_2 monitoring requirements of 40 C.F.R. 60.105(a)(3) to demonstrate compliance with 40 C.F.R. 60.104(a)(1).
All tanks	Under 40 C.F.R. 60 Subpart Ka 60.112a(a)(1)	Stationary source does not have external floating roof tanks.
32 & 33	Under 40 C.F.R. 60 Subpart GG: 60.332(a)(1) & (b)	These units are rated at less than 100 MMBtu/hr and are not electric utility gas turbines.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	60.332(e), (g), (h), (j), (k), & (l)	These units are not military/emergency, research and development, or regenerative cycle gas turbines; were not constructed between 10/3/77 and 10/3/82; and are multi-fuel fired.
Stationary Source-Wide	Under 40 C.F.R. 60 Subpart UU: 60.472(a), (b) & (d) 60.473(a) & (b) 60.474(a), (c)(1) – (4), (e) – (g)	Stationary source does not operate the type of equipment covered by these requirements.
Stationary Source-Wide	Under 40 C.F.R. 60 Subpart GGG/VV: 60.482-10(b) & (c) 60.482-3(j).	Stationary source does not operate the type of equipment covered by these requirements (Vapor recovery systems for example, condensers and absorbers or enclosed combustion devices or an existing reciprocating compressor in a process unit
Oil-water separator tank, EU ID 100	60.692-3(c)	The API separator at the stationary source was not fully or partially covered prior to 5/4/87.
	60.692-3(f)	The API separator is designed to treat more than 250 gpm.
Stationary Source-Wide	Under 40 C.F.R. 61 Subpart M: 61.142, 144, 146, 147, & 149	Stationary source does not operate an Asbestos Mill nor engage in manufacturing or spraying asbestos material.
	61.143	Stationary source does not perform roadway maintenance.
	61.153	No reporting requirements apply. Stationary source is an existing source involved only in asbestos renovation activities.
	61.151 & 154	Stationary source does not operate an active or inactive asbestos waste disposal site.
	61.155	Stationary source does not convert asbestos-containing waste into non-asbestos containing waste.
Stationary Source-Wide	Under 40 C.F.R. 63 Subpart G 63.642(h) & (j)	Applies to new sources. Stationary source is an existing source under Subpart CC.
	63.644(a)(1)	Applies to sources using an incinerator to comply with the miscellaneous process vent provisions. Stationary source does not use an incinerator.
	Under 40 C.F.R. 63 Subpart G 63.119(c) 63.120(b) 63.123(d)	Applies to sources electing to use External Floating Roof (EFR) to comply with storage vessel provisions. Stationary source uses Internal Floating Roof (IFR) and has no plans to use EFR to comply with storage vessel provisions.
All tanks	63.119(d) 63.120(c) 63.123(e)	Applies to sources electing to use EFR converted into IFR to comply with storage vessel provisions. Stationary source uses IFR and has no plans to use EFR converted to IFR to comply with storage vessel provisions.
	63.119(e) 63.120(d) & (e) 63.123(f)	Applies to sources electing to use closed vent system and control device (other than flare) to comply with storage vessel provisions. Stationary source uses IFR and has no plans to use closed vent system and control device to comply with storage vessel provisions.
	Under 40 C.F.R. 63 Subpart CC/Y:	The Kenai Refinery does not have marine vessel loading operations at the Refinery. Marine vessel loading operations occur at Kenai Pipeline Facility and applicable

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	63.651	requirements are included in the Kenai Pipeline Facility operating permit.
Stationary Source-Wide	Under 40 C.F.R. 63 Subpart EEEE: 63.2343 63.2346 63.2350 63.2354 63.2366 63.2370 63.2378 63.2382 63.2386 63.2390 63.2396	Per 63.2338(c)(1), storage tanks, transfer racks, transport vehicles, containers, and equipment leak components that are part of an affected source under another 40 C.F.R. Part 63 are not subject to Subpart EEEE. EU IDs 6, 57 – 60, 75, 76, 78, 83 – 89, 96 – 100, 102, and 117 are subject to 40 C.F.R. 63 Subparts CC/G.
EU IDs 6, 57 – 60, 75, 76, 78, 83 – 89, 96 – 100, 102, and 117	Under 40 C.F.R 63 Subpart GGGGG: 63.7884 – 7787 63.7890 – 7893 63.7895 – 7898 63.7900 – 7903 63.7905 – 7908 63.7910 – 7913 63.7915 – 7918 63.7920 – 7922 63.7925 – 7928 63.7935 – 7938 63.7945 63.7950 - 7952	The Refinery's remediation activities are covered by a RCRA Corrective Action order. The total quantity of the HAP listed in Table 1 of Subpart GGGGG that is contained in the remediation material excavated, extracted, pumped, or otherwise removed during all of the site remediation activities conducted at the Tesoro Kenai Refinery is less than 1 megagram (Mg) annually.
Stationary Source-Wide	Under 40 C.F.R. 63 Subpart UUU: 63.1564 & 1565	Tesoro does not operate a catalytic cracking unit.

Section 10. Visible Emissions Forms

VISIBLE EMISSION OBSERVATION FORM

This form is designed to be used in conjunction with EPA Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources." Temporal changes in emission color, plume water droplet content, background color, sky conditions, observer position, etc. should be noted in the comments section adjacent to each minute of readings. Any information not dealt with elsewhere on the form should be noted under additional information. Following are brief descriptions of the type of information that needs to be entered on the form: for a more detailed discussion of each part of the form, refer to "Instructions for Use of Visible Emission Observation Form."

- Source Name: full company name, parent company or division or subsidiary information, if necessary.
- Address: street (not mailing or home office) address of facility where VE observation is being made.
- Phone (Key Contact): number for appropriate contact.
- Source ID Number: number from NEDS, agency file, etc.
- Process Equipment, Operating Mode: brief description of process equipment (include type of facility) and operating rate, % capacity, and/or mode (e.g. charging, tapping, shutdown).
- Control Equipment, Operating Mode: specify type of control device(s) and % utilization, control efficiency.
- Describe Emission Point: for identification purposes, stack or emission point appearance, location, and geometry; and whether emissions are confined (have a specifically designed outlet) or unconfined (fugitive).
- Height Above Ground Level: stack or emission point height relative to ground level; can use engineering drawings, Abney level, or clineometer.
- Height Relative to Observer: indicate height of emission point relative to the observation point.
- Distance from Observer: distance to emission point; can use rangefinder or map.
- Direction from Observer: direction plume is traveling from observer.
- Describe Emissions and Color: include physical characteristics, plume behavior (e.g., looping, lacy, condensing, fumigating, secondary particle formation, distance plume visible, etc.), and color of emissions (gray, brown, white, red, black, etc.). Note color changes in comments section.
- Visible Water Vapor Present?: check "yes" if visible water vapor is present.
- If Present, is Plume…: check "attached" if water droplet plume forms prior to exiting stack, and "detached" if water droplet plume forms after exiting stack.
- Point in Plume at Which Opacity was Determined: describe physical location in plume where readings were made (e.g., 1 ft above stack exit or 10 ft. after dissipation of water plume).
- Describe Plume Background: object plume is read against, include texture and atmospheric conditions (e.g., hazy).
- Background Color: sky blue, gray-white, new leaf green, etc.
- Sky conditions: indicate cloud cover by percentage or by description (clear, scattered, broken, overcast).
- Wind Speed: record wind speed; can use Beaufort wind scale or hand-held anemometer to estimate.
- Wind Direction From: direction from which wind is blowing; can use compass to estimate to eight points.
- Ambient Temperature: in degrees Fahrenheit or Celsius.

  Wet Bulb Temperature: can be measured using a sling psychrometer

  RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
- Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.

  Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.

  Sun's Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen's shadow crosses the observer's position.
- Observation Date: date observations conducted.
- Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
- Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.

  Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.

  Range of Opacity: note highest and lowest opacity number.
- Observer's Name: print in full.

  Observer's Signature, Date: sign and date after performing VE observation.
- Organization: observer's employer.

Certified By, Date: name of "smoke school" certifying observer and date of most recent certification.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR PERMITS PROGRAM - VISIBLE EMISSIONS OBSERVATION FORM

Page No._____

Stationary Source Name		Type of Emission Unit			Observation Date		Start Time		End Time
					Sec / Min	0	15	30	45	Comments
Emission Unit Location					1					
City	State		Zip		2					
Phone # (Key Contact)		Stationary Source ID Number			3					
Process Equipment		Operating Mode			4					
Control Equipment		Operating Mode			5					
Describe Emission Point/Location					6					
Height above ground level	Height relative to observer		Clinometer Reading		7					
Distance From Observer		Direction From Observer			8					
Start	End	Start	End							
Describe Emissions & Color					9					
Start		End								
Visible Water Vapor Present? If yes, determine approximate distance from the										
No	Yes	stack exit to w here the plume w as read			10					
Point in Plume at Which Opacity Was Determined					11					
Describe Plume Background		Background Color			12					
Start		Start								
End		End			13					
Sky Conditions:					14					
Start		End								
Wind Speed		Wind Direction From			15					
Start	End	Start	End							
Ambient Temperature		Wet Bulb Temp		RH percent	16					
SOURCE LAYOUT SKETCH:	1 Stack or Point Being Read		2 Wind Direction From		17					
3 Observer Location	4 Sun Location	5 North Arrow	6 Other Stacks		18					
					19					
					20					
					21					
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					29					
					30					
					Range of Opacity					
					Minimum			Maximum		
I have received a copy of these opacity observations					Print Observer's Name					
Print Name:					Observer's Signature					Date
Signature:										Observer's Affiliation:
Title		Date			Certifying Organization					
					Certified By:				Date	

Data Reduction:

Duration of Observation Period (minutes):	Duration Required by Permit (minutes):
Number of Observations:	Highest Six–Minute Average Opacity (%):
Number of Observations exceeding 20%:	
In compliance with six-minute opacity limit? (Yes or No)	Highest 18-Consecutive –Minute Average Opacity (%)(engines and turbines only)

Average Opacity Summary:

Set Number	Time			Opacity		
	Start	End		Sum	Average	Comments

Section 11. ADEC Notification Form [21]

Kenai Refinery	**AQ0035TVP02**
Stationary Source Name	**Air Quality Permit No.**
Tesoro Alaska Company LLC	
Company Name	**Date**

When did you discover the Excess Emissions/Permit Deviation?

Date: _____ / _____ / _____ Time: _____ :/ _____

When did the event/deviation occur?

Begin Date: _____ / _____ / _____ Time: _____ : _____ (Use 24-hr clock.)

End Date _____ / _____ / _____ Time: _____ : _____ (Use 24-hr clock.)

What was the duration of the event/deviation? ____ : ____ (hrs:min) or _____ days

(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for Notification: (please check only 1 box and go to the corresponding section)

☐ Excess Emissions – Complete Section 1 and Certify

☐ Deviation from Permit Condition – Complete Section 2 and Certify

☐ Deviations from COBC, CO, or Settlement Agreement – Complete Section 2 and Certify

Section 1. Excess Emissions

(a) Was the exceedance: ☐ Intermittent or ☐ Continuous

(b) Cause of Event (Check one that applies):

☐ Start Up/Shut Down ☐ Natural Cause (weather/earthquake/flood)

☐ Control Equipment Failure ☐ Schedule Maintenance/Equipment Adjustment

☐ Bad Fuel/Coal/Gas ☐ Upset Condition ☐ Other _____

(c) Description
Describe briefly, what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emissions Units Involved:
Identify the emission unit involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

EU ID	EU Name	Permit Condition Exceeded/Limit/Potential Exceedance

[21] Revised as of August 20, 2008.

(e) Type of Incident (please check only one):

☐ Opacity _____ % ☐ Venting _____ gas/scf ☐ Control Equipment Down

☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Other _____

☐ Marine Vessel Opacity ☐ Flaring _____

(f) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable? ☐ Yes ☐ No

Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ Yes ☐ No

Certify Report (Go to end of form.)

Section 2. Permit Deviations

- Permit Deviation Type (check only one box, corresponding with the section in the permit):

☐ Emission Unit-Specific
☐ Failure to Monitor/Report
☐ General Source Test/Monitoring Requirements
☐ Recording/Reporting/Compliance Certification
☐ Standard Conditions Not Included in the Permit
☐ Other Section: _____ (Title of section and section number of your permit).

☐ Generally Applicable Requirements
☐ Reporting/Monitoring for Diesel Engines
☐ Recordkeeping Failure
☐ Insignificant Emission Unit
☐ Stationary Source Wide

- Emission Unit Involved:

  Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding permit conditions and the deviation.

EU ID	EU Name	Permit Condition/ Potential Deviation

- Description of Potential Deviation:
  Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

- Corrective Actions:
  Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j)*

To Submit this Report:

Fax to: 907-451-2187

Or

Email to: DEC.AQ.Airreports@alaska.gov

If faxed or emailed, the report must be certified within the Operating Report required for the same reporting period per Condition 141.

Or

Mail to: ADEC
Air Permits Program
610 University Avenue
Fairbanks, AK 99709-3643

Or

Phone Notification: 907-451-5173

Phone notifications require a written follow-up report.

Or

Submission of information contained in this report can be made electronically at the following website: *http://dec.alaska.gov/applications/air/airtoolsweb /*

If submitted online, report must be submitted by an authorized E-Signer for the stationary source.

[18 AAC 50.346(b)(3)]

Section 12. Emission Inventory Form

ADEC Reporting Form **Emission Inventory Reporting** **State of Alaska Department of Environmental Conservation** **Division of Air Quality**	**Emission Inventory Year- [ ]**

Mandatory information is highlighted in bright yellow. Make additional copies as needed.

Stationary Source Detail		
Inventory start date		
Inventory end date		
ADEC ID or Permit Number		
EPA ID:		
Census Area/ Community		
Facility Name		
Facility Physical Location	**Address:**	
	City, State, Zip Code:	
	Latitude:	**Longitude:**
	Legal Description:	
Owner Name & Address & contact number	**Owner Name:**	
	Owner Address:	
	Phone Number:	
Mailing Contact Information	**Mailing Address:**	
Line of Business (NAICS)		
Line of Business (SIC)		
Facility Status:		

Emission Unit Data			
Specifications			
ID		**Design Capacity**	
Description			
Emission Unit Status			
Manufacturer		**Manufactured Year**	
Model Number		**Serial Number**	
Regulations			
Regulation/Description:			
Control Equipment (List All if applicable):			
ID			
System Description	-		
Equipment Type(s)			
Manufacturer			
Model			
Control Efficiency (%)			
Capture Efficiency (%)			
Pollutants Controlled		**Reduction Efficiency (%):**	
		Reduction Efficiency (%):	

Processes	
Process	**Primary Process**
SCC Code	(ex. 20100201)
	>
	>
	>
	>
Material Processed	
Period Start	
Period End	
Throughput (units)	
Summer %	

Fall %	
Winter %	
Spring %	

Operational Schedule

Days/Week	
Hours/Day	
Weeks/Year	
Hours/Year	

Fuel Characteristics

Heat Content	Elem. Sulfur Content (%)	H2S Sulfur Content	Ash Content (if applicable)

Heating

Heat Input	Heat Output	Heat Values Convention

Emissions Operating Type:

Pollutant	Emission Factor (EF)	EF Numerator	EF Denominator	EF Source	Tons
Carbon Monoxide (CO)					
Nitrogen Oxides NOx					
PM10 Primary (PM10-PRI)					
PM2.5 Primary (PM25-PRI)					
Sulfur Dioxide (SO2)					
Ammonia (NH3)					
Lead and lead compounds					
Volatile Organic Compounds (VOC)					

Emissions' Release Point

Release Point ID					
Apportion%					

Process	**Secondary Process**
SCC Code	(ex. 20100201)
	>

	>
	>
	>
Material Processed	
Period Start	
Period End	
Throughput (units)	
Summer %	
Fall %	
Winter %	
Spring %	

Operational Schedule

Days/Week	
Hours/Day	
Weeks/Year	
Hours/Year	

Fuel Characteristics

Heat Content	Elem. Sulfur Content (%)	H2S Sulfur Content	Ash Content (if applicable)

Heating

Heat Input	Heat Output	Heat Values Convention

Emissions Operating Type:

Pollutant	Emission Factor (EF)	EF Numerator	EF Denominator	EF Source	Tons
Carbon Monoxide (CO)					
Nitrogen Oxides NOx					
PM10 Primary (PM10-PRI)					
PM2.5 Primary (PM25-PRI)					
Sulfur Dioxide (SO2)					
Ammonia (NH3)					
Lead and lead compounds					

Volatile Organic Compounds (VOC)					
Emissions' Release Point					
Release Point ID					
Apportion%					

Stack Detail (Release Point)	
> Specifications	
ID	
Type	
Description	
Stack Status	
> Stack Parameters	
Stack Height (ft)	
Stack Diameter (ft)	
Exit Gas Temp (F)	
Exit Gas Velocity (fps)	
Exit Gas Flow Rate (acfm)	
> Geographic Coordinate	
Latitude	
Longitude	
Datum	
Accuracy (meters)	
Base Elevation (meters)	

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name:_____Title_____Date _____

Signature:_____ Phone number_____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j)*

To Submit this report:

1. Fax this form to: 907-465-5129; or
2. E-mail to: DEC.AQ.airreports@alaska.gov; or
3. Mail to: ADEC
   Air Permits Program
   410 Willoughby Ave., Suite 303
   PO Box 111800
   Juneau, AK 99801-1800

Or

4. Direct data entry for emission inventory can be done through the Air Online System (AOS). A myAlaska account is needed to gain access and a profile needs to be set up in Permittee Portal.
   http://dec.alaska.gov/Applications/Air/airtoolsweb/.

[18 AAC 50.346(b)(9)]

Section 13. Compliance Assurance Monitoring Plan (CAM)

LOWER TANK FARM SOIL VAPOR EXTRACTION (LTF SVE) HAP AND VOC CONTROLS

BACKGROUND

Emission Unit:

Identification: Lower Tank Farm Soil Vapor Extraction Unit (LTF SVE) Emission Unit 45 (EU 45)

Description: Volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions recovered from the lower tank farm soil remediation vapor extraction unit are routed through granulated activated carbon system prior to release.

Facility: Tesoro Refinery - Kenai, AK

Applicable Regulations, Emission Limits, and Monitoring Requirements:

Covered Emission Limits: VOC emissions and Total HAP emissions

Permit Requirements: The Permittee shall not cause or allow total combined VOC emissions to exceed 16.2 tons and total combined HAP emissions to exceed 2.5 tons from EUs 44 and 45 (E77 SVE and LTF SVE) per consecutive 12-month period.

[Minor Permit No. AQ0035MSS04 Condition 2]

Monitoring Requirements: Determine VOC and HAP emissions on a monthly basis in accordance with Minor Permit No. AQ0035MSS04, Condition 2.6.

Control Technology: Vapors containing VOC and HAP are removed from the contaminated soil and routed through granulated activated carbon system to mitigate emissions.

MONITORING APPROACH

To assure proper operation of the granulated activated carbon system at EU 45.

Equipment:

Control device and closed vent system will be operated at all times when the soil vapor extraction unit, EU 45, is vented to the control device.

Install primary and secondary carbon canisters and operate them in series.

Indicator Ranges:

Measure total hydrocarbon (THC) concentration at the inlet and outlet of the primary carbon canister and at the outlet of the secondary carbon canister in the granulated activated carbon adsorption system on a weekly basis.

Replace existing primary or secondary carbon canister with fresh carbon canister

within 24 hours during normal operation for a 2-canister system when carbon breakthrough is detected.

Breakthrough for the primary carbon canister is defined as a condition where the concentration of THC at the outlet of the primary canister is greater than 50% of the concentration of THC at the inlet of the primary canister. Breakthrough for the secondary carbon canister is defined as a condition where no THC concentration reduction is monitored between the outlet of the primary carbon canister and the outlet of the secondary carbon canister.

Record date of carbon canister change-outs.

MEASUREMENT APPROACH:

Tesoro intends to use a photoionization detector (PID) analyzer and EPA Method TO-15 as specified below to ensure effective operation of the control device, to establish pre-control emission levels, and to ensure compliance with the owner-requested limits (ORL) for VOC and total HAP.

For periods during which EU 45 is in operation, at a consistent time each week[22] analyze THC concentration at the inlet and outlet of the primary carbon canister and at the outlet of the secondary carbon canister in the granulated activated carbon adsorption system with a PID analyzer.

For periods during which EU 45 is in operation, at a consistent time each week[23] analyze VOC and HAP mass emissions and concentration at the inlet of the primary carbon canister and at the outlet of the secondary carbon canister in the granulated activated carbon adsorption system with gas chromatography/mass spectrometry (GC/MS) per EPA Method TO-15.[24]

For each weekly analysis, record the following:

a. Air flow during sampling time in scf/min;

b. VOC and HAP concentration in ppb; and

c. VOC and HAP mass emission in mg/sec.

Table 1 below summarizes the three monitoring locations, the corresponding testing methods, and justification for why each location and test method was selected.

[22] Analyze THC concentration each calendar week with measurements a minimum of 4 days and a maximum of 9 days apart.
[23] Analyze VOC and HAP mass emission and concentration each calendar week with measurements a minimum of 4 days and a maximum of 9 days apart.
[24] Total HAP will be calculated assuming that pollutants that are reported as non-detect values on the sample analyses are "0" and will not contribute to the total.

Table 1 – Monitoring Location and Methodology Summary

EU	Monitoring Locations	Monitoring Method:	Justification
45	At the inlet of the primary carbon canister	EPA Method TO-15 PID analyzer Flow measurement via differential pressure or equivalent	To establish pre-control emission levels and to ensure effective operation of the control device
45	At the outlet of the primary carbon canister	PID analyzer	To ensure effective operation of the control device
45	At the outlet of the secondary carbon canister	EPA Method TO-15 PID analyzer	To ensure compliance with the ORL for VOC and Total HAP

To enable frequent monitoring, the carbon canister control system will be equipped with sampling valves at the inlet of the primary carbon canister, at the outlet of the primary carbon canister, and at the outlet of the secondary carbon canister.

To collect a measurement using the PID analyzer, the sampling valve at the desired monitoring location will be opened and the PID analyzer will be used to sample the outlet gas until a stable reading is obtained. Sampling tubing will be used to connect the sampling valve directly to the PID analyzer. Breakthrough for the primary carbon canister is imminent if the THC measurement at the outlet of the primary carbon canister exceeds 50% of the THC measurement at the inlet of the primary carbon canister based on PID analyzer measurements. Breakthrough for the secondary carbon canister is imminent if no reduction in THC concentration is monitored between the outlet of the primary carbon canister and the outlet of the secondary carbon canister based on PID analyzer measurements. When breakthrough is monitored, the primary or secondary carbon canister will be replaced within 24-hours.

To collect a grab sample using EPA Method TO-15, an evacuated and passivated sampling canister provided by the laboratory and a stainless steel tubing connection to the sample valve are needed. Samples will be taken using the following procedure:

- Measure and record the inlet duct flow measurement via pressure differential or equivalent at the inlet of the primary carbon canister;
- Open the sampling valve to blow out the valve and sample tubing before connecting the sampling canister;
- Open the sampling canister valve and fill until the canister pressure has equalized with the sample stream as indicated by the vacuum gauge; and

- Close the sampling canister valve and the sampling valve on the duct prior to disconnecting the sampling tubing.

After the gas sample is collected and the sampling canister is closed, an identification tag is attached to the sampling canister including the time, date, location, inlet duct flow, and sampler initials. A chain of custody will be completed and the sampling canister will be transported to ALS Environmental Laboratory for analysis.

Quality Improvement Plan (QIP) Threshold:

If the combined analytical results over any 12-month period indicate the calculated total annual emissions are greater than the permit limit, the QIP will be triggered.

Performance Criteria:

Permit Requirements: Total combined VOC emissions shall not exceed 16.2 tons and total combined HAP emissions shall not exceed 2.5 tons from EUs 44 and 45 per consecutive 12-month period.

Data Representativeness: See Table 1 for a description of each sampling point and a justification for the selection of each location and corresponding testing method. These points were chosen to ensure effective operation of the control device, to establish pre control emissions, and to verify that operation of EU 45 does not exceed the permitted emission limits.

Verification of Operational Status: Continuous routing of vapors from the soil vapor extraction unit to the granulated activated carbon system, along with monitoring of VOC/HAP breakthrough to assure effectiveness of carbon absorption.

QA / QC Practices and Criteria: The PID analyzer will be calibrated each day before use in accordance with EPA Method 21 procedures using the following calibration gases:

(1) Zero air (less than 10 ppm of hydrocarbon in air), and

(2) A mixture of either methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

The QA/QC procedures found in EPA Method TO-15 will be followed during the laboratory\ analysis of the weekly samples.

Monitoring Frequency and Data Collection Procedure: The weekly emissions monitoring is designed to track compliance of EU 45 with the permit limits of 16.2 tpy total combined VOC and 2.5 tpy total combined HAP from both EU 44 and EU 45. To demonstrate that EUs 44 and 45 are operating in ongoing compliance with the VOC and HAP emission limits, Tesoro will calculate and record, by the end of each calendar month:

a. The total VOC and HAP emissions from EUs 44 and 45 (in tons), for the previous calendar month, using the weekly monitoring records; and

b. The total VOC and HAP emissions from EUs 44 and 45 (in tons), for the previous 12 consecutive month period.

The breakthrough concentration is monitored weekly and carbon canister change-outs are recorded. See the Measurement Approach section for additional information regarding data collection procedures.

All monitoring records will be recorded on a field log sheet created by Tesoro to include:

- Carbon canister change-out dates;
- The inlet duct flow measurement via pressure differential or equivalent at the inlet of the primary carbon canister when samples are being taken; and
- Weekly monitoring results from the PID analyzer and EPA Method TO-15 as described in the Measurement Approach Section.

Field log sheets will be kept on-site for 5 years as described in Section 6 of AQOO35TVP02 Rev. 5. Additionally, Tesoro will keep records of the calculated total VOC and HAP emissions from EUs 44 and 45 in tons, for the previous 12 consecutive month period in an Excel format or similar electronic calculation record.

JUSTIFICATION

Background:

EU 45 was installed in 2002 to remove reformate and gasoline contaminants from the soil in the lower tank farm area. A granulated activated carbon system mitigates VOC and HAP emissions that are removed during the soil vapor extraction remediation process.

Rationale for Selection of Performance Indicator:

Monitoring the primary and secondary carbon canisters for VOC and/or HAP breakthrough assures effective control technology operation of the granulated activated carbon system.

The monitoring of breakthrough is a common technique for carbon adsorption systems and indicates to Tesoro when to shutdown the soil vapor extraction units for primary or secondary carbon canister change out. These change outs will be completed as needed to maintain effective emissions control during active soil vapor extraction operations.

The PID analyzer was selected as the device to test for breakthrough between the carbon canisters because it produces selective and sensitive instantaneous readings for the volatile aromatic hydrocarbons controlled by the GAC system. Further, the instruments are readily available, as PID analyzer measurements are routinely used at the refinery to monitor carbon canister breakthrough under 40 CFR Part 60 Subpart QQQ (Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems) monitoring.

EPA Method TO-15 was selected to conduct VOC and HAP emission monitoring at EU 45 since the test method is designed for ambient air testing for emission sources. The Compendium of Methods for Toxic Organic Air Pollutants dated January of 1999 further states that “this method applies under most conditions encountered in

sampling of ambient air into canisters." Therefore, it has the flexibility to accommodate the variable sampling conditions associated with the carbon adsorption system. Additionally, the method facilitates weekly testing of the EU 45.

Rationale for Section of Indicator Level:

As the carbon bed operates, the mass transfer zone moves through the bed in the direction of flow toward the bed outlet. Breakthrough occurs when the mass transfer zone reaches the bed outlet. At this point, a sharp increase in the outlet VOC concentration occurs.[25] Breakthrough concentration values indicate that the carbon bed is approaching maximum saturation and must be replaced and regenerated.

The breakthrough concentration value of greater than 50% of the inlet concentration for the primary carbon canister was selected because it is a direct measurement of the efficiency of the carbon canister control device. Before breakthrough occurs, Tesoro would expect to see results less than 5-10% of the inlet concentration at the outlet of the primary carbon canister. The breakthrough concentration value of no monitored concentration reduction for the secondary carbon canister was selected to ensure that the back-up control device remains viable to control emissions not captured by the primary carbon canister.

The VOC and HAP emissions indicator levels were established to ensure compliance with the permit limits established in Condition 2 of Minor Permit No. AQ0035MSS04.

[25] EPA CAM Technical Guidance Document, Appendix B CAM Illustrations, Part B.11.1, Revision 1, January 2005.