DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY OPERATING PERMIT

Permit No. AQ0035TVP03 Issue Date: August 30, 2022
Expiration Date: August 30, 2027

The Alaska 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 one stationary source for purposes of determining applicability with the modification requirements of 18 AAC 50.302.

This permit satisfies the obligation of the owner and operator to obtain an operating permit 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 Control Permit-to-Operate No. 9323-AA008, Construction Permit Nos. 9923-AC010 Revision 1 and AQ0035CP04, and Minor Permit Nos. AQ0035MSS01, AQ0035MSS02, AQ0035MSS07, and AQ0035MSS09 have been incorporated into this operating permit.

Citations listed herein are contained within the effective version of 18 AAC 50 at permit issuance. All federal regulation citations are from those sections adopted by reference in this version of regulation in 18 AAC 50.040 unless otherwise specified.

Upon effective date of this permit, Operating Permit No. AQ0035TVP02 Revision 8 expires.

This Operating Permit becomes effective September 29, 2022.

James R. Plosay, Manager
Air Permits Program

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Abbreviations and Acronyms

%.....percent
4SRB .....4-Stroke Rich Burn
AAC.....Alaska Administrative Code
acfm.....actual cubic feet per minute
ADEC .....Alaska Department of Environmental Conservation
AMP .....Alternate Monitoring Plan
AS.....Alaska Statutes
ASTM.....American Society for Testing and Materials
BACT .....best available control technology
bHp .....brake horsepower
Bpd .....Barrels per day
CAA or The Act Clean Air Act
CAM.....Compliance Assurance Monitoring
CDX.....Central Data Exchange
CEDRI.....Compliance and Emissions Data Reporting Interface
CEMS .....Continuous Emissions Monitoring Monitoring System
C.F.R. .....Code of Federal Regulations
CI.....Compression Ignition (diesel)
CO .....carbon monoxide
CPMS .....Continuous Parametric Monitoring System
Department ..Alaska Department of Environmental Conservation
dscf .....dry standard cubic foot
EIA .....United States Energy Information Administration
ELDAR .....Enhanced Leak Detection and Repair
EPA .....US Environmental Protection Agency
EU ID .....emissions unit identification
gr/dscf.....grain per dry standard cubic foot (1 pound = 7000 grains)
FG.....Fuel Gas composed of a combination of RG, NG and LPG
FGCD .....fuel gas combustion devices
FGRS.....flare gas recovery system
GAPCP .....Good Air Pollution Control Practice
g/Hp-hr .....gram per horsepower-hour
GPH.....gallons per hour
HAPs .....hazardous air pollutants [as defined in AS 46.14.990]
Hp.....horsepower
ICE .....Internal Combustion Engine
ID.....emissions unit identification number
IFR.....Internal Floating Roof
kPa.....kiloPascals
KSCFH.....Kilo standard cubic feet per hour
kW.....Kilowatt
LAER .....lowest achievable emission rate
LDAR .....Leak Detection and Repair
LPG .....Liquefied Peteroleum Gas
LSR .....Light Straight Run
LTPD.....Long Tons per day
MACT .....maximum achievable control technology [as defined in 40 C.F.R. 63]
MMBtu/hr....million British thermal units per hour
MMSCF.....million standard cubic feet
MMSCFD....Million standard cubic feet per day
MR&R.....monitoring, recordkeeping, and reporting
MWh .....Megawatt hour
N/A.....Not applicable
NAICS.....North American Industrial Classification System
NESHAPs....National Emission Standards for Hazardous Air Pollutants [as contained in 40 C.F.R. 61 and 63]
NG.....Natural Gas
ng/J .....nanograms per Joule
NH_3.....ammonia
Notification of Compliance Status NOCS
NO_x.....nitrogen oxides
NNSR .....Nonattainment New Source Review
NSCR .....non-selective catalytic reduction
NSPS .....New Source Performance Standards [as contained in 40 C.F.R. 60]
NSR.....New Source Review
NTE.....not to exceed
O & M .....operation and maintenance
O_2.....oxygen
PAL .....plantwide applicability limitation
Pb.....lead
PM.....Particulate Matter
PM_{10} .....particulate matter less than or equal to a nominal 10 microns in diameter

$PM_{2.5}$.....particulate matter less than or equal to a nominal 2.5 microns in diameter

ppm .....parts per million

ppmvd.....parts per million by volume on a dry basis

PRIP.....Partial Recycle Isomerization Process

psia.....pounds per square inch (absolute)

PSD.....prevention of significant deterioration

PTE.....potential to emit

RICE.....Reciprocating Internal Combustion Engine

RG .....refinery gas

SCFD.....cubic feet per day at standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury)

SCFH.....cubic feet per hour at standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury)

SCFM .....cubic feet per minute at standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury)

SCOT Shell Claus Off-gas Treatment

SI .....Spark Ignition (gas including natural gas, landfill gas, gasoline, propane, etc.)

SIC.....Standard Industrial Classification

SIP .....State Implementation Plan

SPC.....Standard Permit Condition or Standard Operating Permit Condition

SRU .....Sulfur Recovery Unit

SSM .....startup, shutdown, and malfunctions

SO_2.....sulfur dioxide

TPH.....tons per hour

TPY.....tons per year

ULSD.....Ultra Low Sulfur Diesel

VOC.....volatile organic compound [as defined in 40 C.F.R. 51.100(s)]

VOL.....volatile organic liquid [as defined in 40 C.F.R. 60.111b, Subpart Kb]

vol%.....volume percent

wt%.....weight percent

$wt\%S_{fuel}$....weight percent of sulfur in fuel

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 60º 41´ 9.603" North; 151º 22´ 12.993" West
Physical Address:		Mile 22.5, Kenai Spur Highway 54741 Energy Way Kenai, AK 99611
Owner:		**Tesoro Alaska Company, LLC** 19100 Ridgewood Parkway San Antonio, Texas 78259
Operator:		Tesoro Alaska Company, LLC 54771 Energy Way, P.O. Box 3369 Kenai, AK 99611
Permittee's Responsible Official:		Bruce A Jackman, General Manager, Kenai Refinery P.O. Box 3369 Kenai, AK 99611 (907) 776-3500
Designated Agent:		CT Corporation Systems 9360 Glacier Hwy, Suite 202 Juneau, AK 99801
Stationary Source and Building Contact:		Michelle Lee, Manager EHS, Tesoro Alaska Company P.O. Box 3369 Kenai, AK 99611 (907) 776-3594 MLee3@marathonpetroleum.com
Fee Contact:		Lena Wissmar, Plant Controller P.O. Box 3369 Kenai, AK 99611 (907) 776-3816 cwissmar@marathonpetroleum.com
Permit Contact:		Mike Harper, Environmental Supervisor, Tesoro Alaska Company P.O. Box 3369 Kenai, AK 99611 (907) 776-3599 mdharper@marathonpetroleum.com
Process Description:	SIC Code	2911-Petroleum Refining
	NAICS Code:	324110 - Petroleum Refineries

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

Section 2. Emissions Unit Inventory and Description

Emissions units listed in Table A have specific monitoring, recordkeeping, or reporting conditions in this permit. Unless noted elsewhere in the permit, emissions unit descriptions and ratings are given for identification purposes only.

Table A - Emissions Unit Inventory[1]

EU ID	Emissions Unit Name	Emissions Unit Description	Rating/Size	Fuel Type[2]	Installation or Modification Date
Boilers and Heaters					
1	H-101A	Crude Heater	140.0 MMBtu/hr	FG/NG[9]	1969
2	H-101B	Crude Heater	165.0 MMBtu/hr	FG/NG[9]	1977/1997
3	H-201	Powerformer Preheater	31.8 MMBtu/hr	FG/NG[9]	1975
4	H-202	Powerformer Preheater	51.0 MMBtu/hr	FG/NG[9]	1975
5	H-203	Powerformer Preheater	27.9 MMBtu/hr	FG/NG[9]	1975
6	H-204	Powerformer Reheater	53.8 MMBtu/hr	FG/NG[9]	1980
7	H-205	Powerformer Reheater	48.8 MMBtu/hr	FG/NG[9]	1980
8	H-401	Hydrocracker Recycle Gas Heater	38.9 MMBtu/hr	FG/NG[9]	1981/1989
9	H-402	Hydrocracker Recycle Gas Heater	38.0 MMBtu/hr	FG/NG[9]	1981/1989
10	H-403N	Hydrocracker Fractionator Reboiler	50.0 MMBtu/hr	FG/NG[9]	1997
11	H-404	Hydrocracker Stabilizer Reboiler	64.4 MMBtu/hr	FG/NG[9]	1981/1989
12	H-609	Hot Oil Heater	56.0 MMBtu/hr	FG/NG[9]	1969
15	H-701	Fired Steam Generator	36.6 MMBtu/hr	FG/NG[9]	1969
16	H-702	Fired Seam Generator	36.6 MMBtu/hr	FG/NG[9]	1969
17	H-704	Natural Gas Supply Heater	2.0 MMBtu/hr	FG/NG[9]	1985
18	H-801	Fired Steam Generator	32.0 MMBtu/hr	FG/NG[9]	1980
19	H-802	Hot Glycol Heater	10.8 MMBtu/hr	FG/NG[9]	1980
20	H-1001	Hydrogen Reformer Furnace	152.3 MMBtu/hr	FG/NG[9]	1981
22[3]	H-1102	SRU No. 1 Reheater	1.65 MMBtu/hr	NG	1985
23[3]	H-1103	SRU No. 2 Reheater	1.15 MMBtu/hr	NG	1985
24[3]	H-1104	SRU No. 3 Reheater	1.05 MMBtu/hr	NG	1985
25	H-1105	SCOT Tail Gas Burner	2.0 MMBtu/hr	NG	1985
26[3]	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[9]	1986 (installed) 2020 (modified)
28	H-1202	PRIP Recycle H_2 Furnace	11.2 MMBtu/hr	FG/NG[9]	
29	H-1701	Vacuum Tower Heater	91.0 MMBtu/hr	FG/NG[9]	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

EU ID	Emissions Unit Name	Emissions Unit Description	Rating/Size	Fuel Type[2]	Installation or Modification Date
115	H-1601	DDU Charge Heater	20.25 MMBtu/hr	FG	Before 5/14/2007
116	H-1602	Fractionator Tower Reboiler	23.7 MMBtu/hr	FG	Before 5/14/2007
119	H-1801	Naphtha Splitter Reboiler	50.9 MMBtu/hr	NG/FG	10/2010
Turbines and Engines					
32A[1]	GT-1400A	Cogen Turbine Upgrade DLN SOLAR Centaur 50-5900S	53.5 MMBtu/hr	NG/ Diesel	2013
33A[1]	GT-1410A	Cogen Turbine Upgrade DLN SOLAR Centaur 50-5900S	53.5 MMBtu/hr	NG/ Diesel	2013
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	4SRB VTB Recip. Pump Engine – North	5.6 MMBtu/hr (800 Hp)	NG	1969
37	P-605B	4SRB VTB Recip. Pump Engine – South	5.6 MMBtu/hr (800 Hp)	NG	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	4SRB Emergency ICE – Cummins GTA855e	256 Hp	NG	2012
Flares					
42	J-801	Refinery Flare	3.0 MMBtu/hr[4] Purge Gas	NG, FG and Process Upset Gas	1981 (installed) 2010 (modified)
43	SRU Flare	SRU Flare	0.14 MMBtu/hr[4] Purge Gas	NG, Process Upset Gas	1983
Storage Tanks					
56	TK-10	LSR/Isomerate (IFR)	2.1 MMgal	N/A	1968 – 1969
57	TK-11	Crude (IFR)	2.1 MMgal	N/A	1968 – 1969
58	TK-12	Jet (IFR)	12.6 MMgal	N/A	1/2/78
59	TK-13	Crude (IFR)	12.6 MMgal	N/A	2/4/81
60	TK-14	Crude (IFR)	12.6 MMgal	N/A	2/4/81
61	TK-20	Low S VTB/Cutter/LCO (Fixed Roof)	9.37 MMgal	N/A	1968 – 1969
62	TK-22	Diesel/Jet (Fixed Roof)	4.2 MMgal	N/A	1/8/73
63	TK-23	HVGO/VTB (Fixed Roof)	12.6 MMgal	N/A	1/2/78
64	TK-24	Gas Oil (Fixed Roof)	2.1 MMgal	N/A	2/13/80

EU ID	Emissions Unit Name	Emissions Unit Description	Rating/Size	Fuel Type[2]	Installation or Modification Date
65	TK-25	High S VTB/VTB (Fixed Roof)	17.85 MMgal	N/A	4/15/83
66	TK-30	Diesel /Jet (Fixed Roof)	420,000 gallons	N/A	1968 – 1969
67	TK-31	Diesel (Fixed Roof)	630,000 gallons	N/A	1969
68	TK-32	Diesel/Jet (Fixed Roof)	2.94 MMgal	N/A	1968 – 1969
69	TK-33	Bunker/VTB (Fixed Roof)	630,000 gallons	N/A	1968 – 1969
71	TK-35	Diesel (Fixed Roof)	4.2 MMgal	N/A	3/7/73
72	TK-36	Diesel (Fixed Roof)	8.4 MMgal	N/A	4/15/83
73	TK-37	Cutter stock/Jet (Fixed Roof)	4.2 MMgal	N/A	1969
74	TK-39	Hot Oil/Jet A (Fixed Roof)	210,000 gallons	N/A	1969
75	TK-40	Gasoline (IFR)	1.68 MMgal	N/A	1968 – 1969
76	TK-41	Gasoline (IFR)	1.68 MMgal	N/A	1969
77	TK-42	Asphalt (Fixed Roof)	1.68 MMgal	N/A	1969/1996
78	TK-45	Naphtha (IFR)	4.2 MMgal	N/A	1/8/73
79	TK-51	Asphalt (Fixed Roof)	840,000 gallons	N/A	1968 – 1969
83	TK-60	Gasoline (IFR)	630,000 gallons	N/A	1969
84	TK-61	Gasoline/Sidecut (IFR)	420,000 gallons	N/A	1968 – 1969
85	TK-62	Gasoline (IFR)	2.1 MMgal	N/A	1/8/73
86	TK-63	Gasoline (IFR)	2.1 MMgal	N/A	1/8/73
87	TK-64	Gasoline (IFR)	4.2 MMgal	N/A	1975
88	TK-65	Gasoline (IFR)	4.2 MMgal	N/A	8/15/74
89	TK-66	Gasoline (IFR)	4.2 MMgal	N/A	8/15/74
94	TK-97	Asphalt Additive (Fixed Roof)	42,000 gallons	N/A	1969/2002
120	Tank 67	Naphtha (IFR)	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 MMSCFD	N/A	12/23/82
101	None	Sulfur Recovery Unit (SRU)	26 LTPD	N/A	Installed 10/97; Modified 5/07
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
111	None	Tank farm fugitives[5]	N/A	N/A	N/A
112	None	Refinery fugitives[5, 6]	N/A	N/A	N/A
117	None	Distillate Desulfurization (DDU)	10,000 Bpd	N/A	5/07
126	C-810A	FGRS Compressor 1 (subject to NSPS Subpart GGGa/VVa)	40,000 SCFH	N/A	2016

EU ID	Emissions Unit Name	Emissions Unit Description	Rating/Size	Fuel Type[2]	Installation or Modification Date
127	C-810B	FGRS Compressor 2 (subject to NSPS Subpart GGGa/VVa)	40,000 SCFH	N/A	2016
128	None	Amine Unit	2.35 MMlb/d	N/A	1983
131	None	Cooling Tower[5]	7,000 gpm	N/A	N/A
Oily Water Sewer System					
105	TK-04A	Slop Oil (IFR)	13,440 gallons	N/A	1968/1969
106	TK-04B	Slop Oil (IFR)	21,000 gallons	N/A	6/6/84
107	TK-04C	Slop Oil (IFR)	126,000 gallons	N/A	1980
108	TK-96	Wastewater (IFR)	42,000 gallons	N/A	1969/2001
109	VU Drains	Vacuum Unit Drain System	N/A	N/A	4/8/94
118	DDU Drains	DDU Drain System	N/A	N/A	5/2007
123	TK-723	Oil Water Separator (IFR)	144,000 gallons	N/A	07/01/2013
124	TK-724	Slop Oil Tank (Fixed Roof)	395gallons	N/A	08/01/2013
125	CPI	Oil Water Separator (corrugated plate interceptor; Fixed Roof)	7,300 gallons	N/A	2001
130	DAF	Wastewater Treatment, Distillate Air Floatation Unit (DAF)[5]	250 gpm	N/A	N/A
135[7]	TK-725	Slop Oil Tank (Fixed Roof)	21,000 gallons	N/A	2020
136[7]	TK-726	Slop Oil Tank (Fixed Roof)	21,000 gallons	N/A	2020
137[8]	FGRS Drains	FGRS Drain System[8]	N/A	N/A	2016

Notes:

1. The following emission units (as identified in Title V Permit No. AQ0035TVP02 and application for renewal Title V permit AQ0035TVP03) have been removed from the inventory table and their associated MR&R requirements:
   a. EU IDs 14, 38, 44, 45, 48, 80, 81, 82, 92, 93, and 129 *[H-650, P-708A, E77 SVE, LTF SVE, AS-1320, TK-55, TK-57, TK-59, TK-94, TK-95, and WRTO]* have been permanently shutdown and are no longer in service.
   b. 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 [EU ID 25, Scot tail gas burner] to form CO_2.
   c. EU IDs 122a, 122b, and 122c *[TK 723 bypass tanks]* are temporary bypass tanks that were subject to the EPA-approved Alternative Monitoring Plan (AMP) issued August 24, 2014. These tanks have been permanently shutdown and are no longer in service because the AMP is no longer applicable to the stationary source.
   d. EU IDs 32 and 33 *[GT-1400 and GT-1400]* have been completely replaced by EU IDs 32A and 33A, respectively, since 2013. EU IDs 32 and 33 no longer exist in the stationary source.
   e. EU IDs 49, 50, 51, 90, 91, and 95 *[TK-03, TK-04D, TK-05, TK-70, TK-80, and TK-V-1400]* are deemed insignificant emission units under 18 AAC 50.326(e) and (g).

2. NG means Natural Gas; LPG means Liquefied Petroleum Gas; RG means Refinery Gas; and FG means Fuel Gas composed of a combination of NG, LPG, and RG. The Permittee has demonstrated that this fuel gas used in the stationary source meets the definition of "gas" given in Policy and Procedure No. 04.02.103, Topic #4, 6/21/12. N/A means "not applicable," EU does not burn fuel.
3. EU IDs 22, 23, 24, and 26 are small process heaters with potential emissions less than the significant emissions thresholds in 18 AAC 50.326(e) but are subject to NESHAP Subpart DDDDD (Conditions 160 through 163); hence, included in Table A.
4. Flare ratings are based on purge rates. The 3-MMBtu/hr (75,000 SCFD) rating for EU ID 42 comes from the three pilot gas lines (0.2 MMBtu/hr) and the flare vent headers (average of 2.6 MMBtu/hr). Although 75,000 SCFD is the typical purge rate to prevent oxygen infiltration, additional purge up to approximately 200,000 SCFD is sometimes necessary to prevent freezing. EU ID 43 typical purge gas flow rate is 150 SCFH, or 0.14 MMBtu/hr.
5. Per the Permittee's request, the Tank Farm Fugitives, Refinery Fugitives, Dissolved Air Floatation (DAF), and Cooling Tower are added to Table A as EU IDs 111, 112, 130, and 131, respectively, because these units have historically been reported in the air emission inventories.
6. EU ID 112 refers to fugitive emissions from locations in the refinery that are not in a listed process unit. These include the components within the boilerhouse and cogeneration units.
7. Two new slop tanks subject to NSPS 40 C.F.R. 60 Subpart QQQ, per application for a minor modification (Revision 10) to Title V Permit No. AQ0035TVP02 on May 4, 2020.
8. The Flare Gas Recovery System (FGRS) began operation on September 21, 2016. The FGRS is equipped with a drain system subject to NSPS Subpart QQQ.
9. These emission units are permitted to fire LPG, but currently only combust NG and RG.

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

Section 3. State Requirements

Visible Emissions Standard

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 – 12, 15 – 20, 22 – 31, 32A, 33A, 34 – 37, 39 – 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-701, H-702, H-704, H-801, H-802, H-1001, H-1102, H-1103, H-1104, H-1105, H-1106, H-1201/1203, H-1202, H-1701, H-1801, E-1400, E-1410, GT-1400A, GT-1410A, EG-704, EG-801, P-605A, P-605B, P-708B, P-708C, P-719C, J-801, SRU Flare, H-1601, H-1602, H-1801, 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 – 12, 15 – 20, 22 – 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-701, H-702, H-704, H-801, H-802, H-1001, H-1102, H-1103, H-1104, H-1105, H-1106, H-1201/1203, H-1202, H-1701, E-1400, E-1410, EG-801, P-605A, P-605B, P-719C, H-1601, H-1602, H-1801, and EG-705]*, burn only gas[1] as fuel. In each operating report under Condition 205, indicate whether each of these emissions units burned only gas during the period covered by the report. Report under Condition 204 if any fuel other than gas is burneds is burned in any of these emissions units.

1.2. For EU IDs 32A and 33A *[GT-1400A and GT-1410A]*, burn gas as the primary fuel. Monitoring for these emissions units shall consist of a statement in each operating report required under Condition 205 indicating whether each of these emissions units fired gas as the primary fuel during the period covered by the report. If any of these units operated on a back-up liquid fuel during the period covered by the report, the Permittee shall monitor, record, and report in accordance with Condition 10 for that emissions unit.

1.3. For each of EU IDs 34 and 35 *[EG-704 and EG-801]*, as long as the emissions unit does not exceed the operational hour limit in Table D, monitoring shall consist of an annual compliance certification under Condition 206 for the visible emissions standard based on reasonable inquiry. Otherwise, comply with Condition 1.4.

1.4. For each of EU IDs 34 and 35 *[EG-704 and EG-801]* and EU IDs 39 and 40 *[P 708B and P 708C]*, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e)[2] during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 206 for the visible emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 205 if any of EU IDs 34 and 35 *[EG-704 and EG-801]* and EU IDs 39 and 40 *[P 708B and P 708C]* exceeds any of the significant emissions thresholds listed in

[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.

[2] The equivalent maximum number of operational hours at which each of EU IDs 34, 35, 39 and 40 would not exceed the thresholds in 18 AAC 50.326(e) are 260, 204, 425 and 275 hours, respectively, per 12 consecutive-month period.

18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 2 through 4 for the remainder of the permit term for that emissions unit.

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) & (c)(6)]

Visible Emissions Monitoring, Recordkeeping, and Reporting (MR&R)

Liquid Fuel-Burning Emissions Units, EU IDs 34, 35, 39, and 40

2. Visible Emissions Monitoring. When required by Condition 1.4, or in the event of replacement[3] during the permit term, the Permittee shall observe the exhaust of EU IDs 34, 35, 39, and 40 for visible emissions using either the Method 9 Plan under Condition 2.3 or the Smoke/No-Smoke Plan under Condition 2.4.

2.1. The Permittee may change visible emissions monitoring plan for an emissions unit at any time unless prohibited from doing so by Condition 2.5.

2.2. The Permittee may for each unit elect to continue the visible emissions monitoring schedule specified in Conditions 2.3.b through 2.3.e or Conditions 2.4.b through 2.5 that remains in effect from a previous permit.

2.3. **Method 9 Plan.** For all observations in this plan, observe emissions unit exhaust following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations.

a. First Method 9 Observation. Except as provided in Condition 2.2 or Condition 2.5, observe the exhaust of EU IDs 34, 35, 39, and 40 according to the following criteria:

(i) For any unit, observe exhaust for 18 minutes within 14 calendar days after changing from the Smoke/No-Smoke Plan of Condition 2.4.

(ii) For any unit replaced, observe exhaust within 60 days of the newly installed emissions unit becoming fully operational.[4] Except as provided in Condition 2.3.e, after the First Method 9 observation:

(A) For EU IDs 34, 35, 39, and 40, comply with Conditions 1.3 and/or 1.4, as applicable.

(iii) For any of EU IDs 34, 35, 39, and 40, observe the exhaust of the emissions unit within 30 days after the calendar month during which monitoring was triggered under Condition 1.4; or for an emissions unit with intermittent operations, within the first 30 days during the unit's next scheduled operation.

[3] "*Replacement,*" as defined in 40 C.F.R. 51.166(b)(32).
[4] "*Fully operational*" means upon completion of all functionality checks and commissioning after unit installation. "*Installation*" is complete when the unit is ready for functionality checks to begin.

b. Monthly Method 9 Observations. After the first Method 9 observation conducted under Condition 2.3.a, perform observations at least once in each calendar month that the emissions unit operates.

c. Semiannual Method 9 Observations. After at least three monthly observations under Condition 2.3.b, unless a six-consecutive-minute average opacity is greater than 15 percent and one or more observations are greater than 20 percent, perform semiannual observations

(i) no later than seven months, but not earlier than five months, after the preceding observation; or

(ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following seven months after the preceding observation.

d. Annual Method 9 Observations. After at least two semiannual observations under Condition 2.3.c, unless a six-consecutive-minute average is greater than 15 percent and one or more individual observations are greater than 20 percent, perform observations

(i) no later than 12 months, but not earlier than 10 months, after the preceding observation; or

(ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following 14 months after the preceding observation.

e. Increased Method 9 Frequency. If a six-consecutive-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more individual observations are greater than 20 percent, then increase or maintain the observation frequency for that emissions unit to at least monthly intervals as described in Condition 2.3.b, and continue monitoring in accordance with the Method 9 Plan.

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

a. Initial Monitoring Frequency. Observe the emissions unit exhaust during each calendar day that the emissions unit operates for a minimum of 30 days.

b. Reduced Monitoring Frequency. If the emissions unit operates without visible emissions for 30 consecutive operating days as required in Condition 2.4.a, observe the emissions unit exhaust at least once in every calendar month that an emissions unit operates.

c. Smoke Observed. If visible emissions are observed, comply with Condition 2.5.

2.5. **Corrective Actions Based on Smoke/No Smoke Observations.** If visible emissions are present in the emissions unit exhaust during an observation performed

under the Smoke/No Smoke Plan of Condition 2.4, then the Permittee shall either begin the Method 9 Plan of Condition 2.3 or

a. Initiate actions to eliminate visible emissions from the emissions 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 visible emissions; and

c. After completing the actions required under Condition 2.5.a,

(i) conduct smoke/no smoke observations in accordance with Condition 2.4

(A) at least once per day for the next seven operating days, if applicable, until the initial 30-day observation period of Condition 2.4.a is completed; and

(B) continue as described in Condition 2.4.b; or

(ii) if the actions taken under Condition 2.5.a do not eliminate the visible emissions, or if subsequent visible emissions are observed under the schedule of Condition 2.5.c(i)(A), then observe the emissions unit exhaust using the Method 9 Plan unless the Department gives written approval to resume observations under the Smoke/No Smoke Plan. After observing visible emissions and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates visible emissions and restart the Smoke/No Smoke Plan under Condition 2.4.a.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(i)]

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

3.1. For all Method 9 observations,

a. the observer shall record the following:

(i) the name of the stationary source, emissions unit and location, emissions unit type, observer's name and affiliation, and the date on the Visible Emissions Observation Form in Section 13;

(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 or best estimate, if unknown) 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 Emission Observation Form in Section 13; 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,

(i) divide the observations recorded on the record sheet into sets of 24 consecutive observations;

(ii) sets need not be consecutive in time and in no case shall two sets overlap;

(iii) for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24;and

(iv) record the average opacity on the sheet.

c. Calculate and record the highest six- and 18-consecutive-minute average opacities observed.

3.2. If using the Smoke/No Smoke Plan of Condition 2.4, 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. the EU ID of the emissions unit observed;

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

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

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

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

g. operating rate (load or fuel consumption rate or best estimate**,** if unknown).

3.3. The records required by Conditions 3.1 and 3.2 may be kept in electronic format.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(ii)]

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

4.1. In the first operating report required in Condition 205 under this permit term, the Permittee shall state the intention to either continue the visible emissions monitoring schedule in effect from the previous permit or reset the visible emissions monitoring schedule.

4.2. Include in each operating report required under Condition 205 for the period covered by the report:

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

b. for all Method 9 Plan observations:

(i) copies of the observation results (i.e. opacity observations) for each emissions unit, 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-consecutive- and 18-consecutive-minute average opacities observed; and

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

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

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

4.3. Report under Condition 204:

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

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

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(iii)]

Flares

5. Visible Emissions MR&R. The Permittee shall monitor, record and report as follows:

5.1. Observe flare events[5] on EU IDs 42 and 43, for visible emissions following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations according to the following schedule:

[5] For purposes of this permit, a *"flare event"* is flaring of gas during daylight for greater than one hour as a result of scheduled release operations; i.e., maintenance or well testing activities. It does not include non-scheduled release operations, i.e., process upsets, emergency flaring, or de-minimis venting of gas incidental to normal operations.

a. Conduct an initial visible emissions observation on EU IDs 42 and 43 within 12 months of the effective date of this permit.

b. Conduct subsequent visible emissions observations within 14 months of, but not earlier than three months after, the preceding flare event visible emissions observation.

c. If there are no flare events that meet the requirements of Condition 5.1.a or 5.1.b, the Permittee shall observe the next daylight flare event.

5.2. Record the following information for each observed flare event:

a. the flare EU ID number;

b. results of the Method-9 observations;

c. reason for flaring;

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

e. volume of gas flared.

5.3. The records by Condition 5.2 may be kept in electronic format.

5.4. Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available.

5.5. Include the following in the operating report required by Condition 205 for the period covered by the report:

a. copies of the records required by Condition 5.2; and

b. if an annual flare event observation required by Condition 5.1.a or Condition 5.1.b has not been fulfilled for the year and/or monitoring of a flare event is postponed, an explanation of the reason the event was not monitored.

5.6. Report under Condition 204

a. whenever the visible emissions standard in Condition 1 is exceeded; or

b. the monitoring required under Condition 5.1 is not completed, except as allowed under Condition 5.4.

5.7. If no flare events are monitored during a certification period, the Permittee shall certify compliance under Condition 206 with the visible emissions standard in Condition 1 based on reasonable inquiry.

[18 AAC 50.040(j)(4), 50.326(j)(3) & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(i) - (iii)]
[40 C.F.R. 71.6(a)(3)(i) - (3)(iii)]

Particulate Matter (PM) Emissions Standards

6. Industrial Process and Fuel-Burning Equipment PM Emissions. The Permittee shall not cause or allow PM emitted from EU IDs 1 – 12, 15 – 20, 22 – 31, 32A, 33A, 34 – 37, 39 – 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-701, H-702, H-704, H-801, H-802, H-1001, H-1102, H-1103, H-1104, H-1105, H-1106, H-1201/1203, H-1202, H-1701, H-1801, E-1400, E-1410, GT-1400A, GT-1410A, EG-704, EG-801, P-605A, P-605B, P-708B, P-708C, P-719C, J-801, SRU Flare, H-1601, H-1602, H-1801, 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)(4), 50.055(b)(1), 50.326(j)(3), and 50.346(c)]
[40 C.F.R. 71.6(a)(1)]

6.1. For EU IDs 1 – 12, 15 – 20, 22 – 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-701, H-702, H-704, H-801, H-802, H-1001, H-1102, H-1103, H-1104, H-1105, H-1106, H-1201/1203, H-1202, H-1701, E-1400, E-1410, EG-801, P-605A, P-605B, P-719C, H-1601, H-1602, H-1801, and EG-705]*, the Permittee shall comply with Condition 1.1.

6.2. For each of EU IDs 34 and 35 *[EG-704 and EG-801]*, as long as the emissions unit does not exceed the operational hour limit in Table D, monitoring shall consist of an annual compliance certification under Condition 206 for the PM emissions standard based on reasonable inquiry. Otherwise, monitor, record and report in accordance with Conditions 7 through 9 for the remainder of the permit term for that emissions unit.

6.3. For each of EU IDs 34 and 35 *[EG-704 and EG-801]* and EU IDs 39 and 40 *[P 708B and P 708C]*, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e)[6] during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 206 for the PM standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 205 if any of EU IDs 34 and 35 *[EG-704 and EG-801]* and EU IDs 39 and 40 *[P 708B and P 708C]* reaches any of the significant emissions thresholds and monitor, record, and report in accordance with Conditions 7 through 9 for the remainder of the permit term for that emissions unit.

6.4. For EU IDs 32A and 33A *[GT-1400A and GT-1410A]*, the Permittee shall comply with Condition 1.2.

6.5. For EU IDs 42 and 43 *[J-801 and SRU Flare]*, shall comply with Condition 5.

[18 AAC 50.040(j)(4), 50.326(j)(3) & 50.346(c)]
[40 C.F.R. 71.6(a)(3)]

[6] The significant emissions thresholds for EU IDs 34, 35, 39 and 40 are equivalent to 260, 204, 425 and 275 operating hours, respectively, in any 12-consecutive-month period.

PM MR&R

Liquid Fuel-Burning Engines and Turbines, EU IDs 32A, 33A 34, 35, 39, and 40

7. PM Monitoring. The Permittee shall conduct source tests on diesel engines and liquid fuel-burning turbines, EU IDs 32A and 33A (when required by Condition 10.3.a) and EU IDs 34, 35, 39, and 40, to determine the concentration of PM in the exhaust of each emissions unit as follows:

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

7.1. If the result of any Method 9 observation conducted under Condition 2.3 for any of EU IDs 34, 35, 39, and 40 is greater than the criteria of Conditions 7.2.a or 7.2.b, or if the Method 9 observation conducted under Condition 10.3 for EU IDs 32A and 33A exceeds the standard in Condition 1, the Permittee shall, within six months of that Method 9 observation, either

a. take corrective action and observe the emissions unit exhaust under load conditions comparable to those when the criteria were exceeded, following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations, to show that emissions are no longer greater than the criteria of Condition 7.2; or

b. except as exempted in Condition 7.4, conduct a PM source test according to requirements set out in Section 8.

7.2. Take corrective action or conduct the PM source test, in accordance with Condition 7.1, if any Method 9 observation under Condition 2.3 results in an 18-minute average opacity greater than

a. 20 percent for an emissions unit with an exhaust stack diameter that is equal to or greater than 18 inches; or

b. 15 percent for an emissions unit with an exhaust stack diameter that is less than 18 inches, unless the Department has waived this requirement in writing.

7.3. During each one-hour PM source test run under Condition 7.1.b, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive-minute average opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.

7.4. The PM source test requirements in Condition 7.1.b are waived for an emissions unit if

a. a PM source test on that unit has shown compliance with the PM standard during this permit term; or

b. corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 2.3) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 7.2.

8. PM Recordkeeping. The Permittee shall with comply following:

8.1. Keep records of the exhaust stack diameters of EU IDs 32A, and 33A; and

8.2. Keep records of the results of any source test and visible emissions observations conducted under Condition 7.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(ii)]

9. PM Reporting. The Permittee shall report as follows:

9.1. Notify the Department of any Method 9 observation results that are greater than the threshold of either Condition 7.2.a or Condition 7.2.b within 30 days of the end of the month in which the observations occurred. Include the dates, EU ID(s), and results when an observed 18-minute average opacity was greater than an applicable threshold in Condition 7.2.

9.2. In each operating report under Condition 205, include:

a. a summary of the results of any PM source test and visible emissions observations conducted under Condition 7; and

b. copies of any visible emissions observation results greater than the thresholds of Condition 7.2, if they were not already submitted.

9.3. Report the stack diameters of EU IDs 32A, and 33A in the next operating report under Condition 205 following issuance of this permit.

9.4. Report in accordance with Condition 204

a. anytime the results of a PM source test exceed the PM emissions standard in Condition 6; or

b. if the requirements under Condition 7.1 were triggered and the Permittee did not comply on time with either Condition 7.1.a or 7.1.b. Report the deviation within 24 hours of the date compliance with Condition 7.1 was required.

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

Visible Emissions & PM MR&R

Dual Fuel-Burning Equipment, EU IDs 32A and 33A

10. The Permittee shall monitor, record, and report the monthly hours of operation when operating on a back-up liquid fuel.

10.1. For any of EU IDs 32A and 33A that does not exceed 400 hours of operations per calendar year on a back-up liquid fuel, monitoring of compliance for visible emissions and PM shall consist of an annual certification under Condition 206 based on reasonable inquiry.

10.2. For any of EU IDs 32A and 33A, notify the Department and begin monitoring the affected emissions unit in accordance with Condition 10.3 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, or during the next scheduled operation on back-up liquid fuel.

10.3. When required to do so by Condition 10.2, observe the emissions unit exhaust, following 40 C.F.R. 60, Appendix A-4 Method 9, for 18 minutes to obtain 72 consecutive 15-second opacity observations.

a. If the observation exceeds the standard in Condition 1, monitor as described in Condition 7.

b. If the observation does not exceed the limit in Condition 1, 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.[7]

10.4. Keep records and report in accordance with Conditions 3, 4, 8, and 9.

10.5. Report under Condition 204 if the Permittee fails to comply with any of Conditions 10.2, 10.3 and 10.4.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(i) – (3)(iii)]

Sulfur Compound Emissions Standards

11. Industrial Process and Fuel-Burning Equipment Sulfur Compound Emissions. The Permittee shall comply with the following sulfur compound emissions limits:

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

11.1. For EU IDs 1, 3 – 7, 12, 15, 16, 18, 19, 20, 35 – 37, 39, and 41 *[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, and P-719C]* listed in Table A, fuel-burning equipment at the Kenai Refinery constructed or modified on or 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)]

11.2. For fuel-burning equipment at the Kenai Refinery constructed or modified after November 1, 1982, do not exceed emissions with a SO_2 concentration, averaged over three hours, equal to

a. the concentration of uncontrolled emissions that would result from burning gas[8] containing 230 mg/dscm (162 ppmvd) hydrogen sulfide (H_2S) for emissions units that burn only fuel gas; EU IDs 2, 8 – 11, 17, 22 – 24, 26 – 31,

[7] 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.

[8] For purposes of this permit, *gas* is defined as fuel gas (FG) and/or natural gas (NG) and/or LPG.

42, 43, 48, 115, 116, 119, and 121 *[H-101B, H-401, H-402, H-403N, H-404, H-704, H-1102, H-1103, H-1104, H-1106, H-1201/1203, H-1202, H-1701, E-1400, E-1410, ,J-801, SRU Flare, AS-1320, H-1601, H-1602, H-1801, and EG-705];*

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

b. 500 ppm for emission units that do not burn fuel gas, EU IDs 34 and 40 *[EG-704 and P-708C]*;

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

c. a concentration based on the allowable emissions in Conditions 11.2.a and 11.2.b prorated by the proportion of fuel gas and other fuels to the total fuel burned in emission units that burn a combination of fuel gas and other fuels, for EU IDs 32A and 33A *[GT-1400A and GT-1410A]*; and

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

d. for EU ID 25 *[H-1105]*, located in EU ID 101 *[SRU]* rated at more than 20 LTPD:

(i) 250 ppm SO_2 at zero percent oxygen on a dry basis, or

(ii) 10 ppm H_2S and a total of 300 ppm reduced sulfur compounds, expressed as SO_2, 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 MR&R

12. Sulfur Compound Emissions MR&R. To demonstrate compliance with the applicable state sulfur compound emissions standards in Conditions 11.1 through 11.2.d, the Permitte shall:

12.1. For all fuel gas-burning emissions units, EU IDs 1 – 12, 15 – 20, 22 – 31, 36, 37, 41 – 43, 115, 116, 119, and 121 and EU IDs 32A and 33A (when burning NG), comply with the BACT gaseous fuel H_2S content limits in Conditions 15 through 16 and corresponding MR&R requirements;

12.2. For EU IDs 32A and 32 (when burning diesel fuel), comply with the PSD avoidance diesel fuel sulfur content ORL of less than 0.0225 wt%S and MR&R requirements in Condition 18;

12.3. For diesel fuel-fired EU IDs 34, 35, 39 and 40, comply with the BACT diesel fuel sulfur content limit of 0.35 percent sulfur by weight ($wt\%S_{fuel}$) and MR&R requirements in Condition 14; and

12.4. Report as excess emissions, in accordance with Condition 204 whenever any of the fuel combusted exceeds the applicable sulfur compound limitations in Conditions 11.1 through 11.2.d. 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)(4) & 50.326(j)(4)]

[40 C.F.R. 71.6(a)(3) & (c)(6)]

Insignificant Emissions Units

13. For emissions 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:

13.1. **Visible Emissions 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)]

13.2. **Particulate Matter 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)]

13.3. **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)]

13.4. **General MR&R for Insignificant Emissions Units:** The Permittee shall comply with the following:

a. Submit the compliance certifications of Condition 206 based on reasonable inquiry;

b. Comply with the requirements of Condition 187;

c. Report in the operating report required by Condition 205 if current actual emissions of an emissions unit that has historically been classified as insignificant have become greater than any of the significant emissions thresholds of 18 AAC 50.326(e); and

d. No other monitoring, recordkeeping or reporting is required for insignificant emissions units to demonstrate compliance with the emissions standards under Conditions 13.1, 13.2, and 13.3.

[18 AAC 50.346(b)(4)]

Section 4. Preconstruction Permit[9] Requirements

Best Available Control Technology (BACT) Emissions Limits

For SO_2 Emissions

14. Diesel Fuel Sulfur BACT Limit. The Permittee shall limit the sulfur content of the diesel fuel combusted in EU IDs 34, 35, 39 and 40 *[EG-704, EG-801, P-708B, and P-708C]* to 0.35 percent sulfur by weight ($wt\%S_{fuel}$)[10]. Monitor, record, and report as follows:

14.1. Monitor and record the fuel sulfur content of the diesel fuel combusted in EU IDs 34, 35, 39, and 40 *[EG-704, EG-801, 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.

14.2. Include copies of the records required by Condition 14.1 with the stationary source operating report required by Condition 205 for the period covered by the report.

14.3. Report as excess emissions in accordance with Condition 204, whenever the fuel combusted exceeds the sulfur content limit in Condition 14.

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

15. Fuel Gas (FG)[11] H_2S BACT Limit (NG, LPG, and RG Combined). The Permittee shall limit the sulfur content of the FG burned at the Kenai Refinery to 162 ppmv H_2S or 230 mg/dscm H_2S determined on a 3-hr rolling average basis. Monitor, record, and report as follows:

15.1. To ensure compliance with the BACT limits in Condition 15, comply with Condition 26 (NSPS Subparts J and Ja) and Conditions 108 through 109 (NSPS Subpart KKKK) and corresponding MR&R requirements, as applied to affected EUs when burning fuel gas.

15.2. Keep records of the results of H_2S content obtained in Condition 15.1. Calculate and record the monthly average and maximum 3-hour rolling average FG concentration of sulfur as H_2S ppmv and in mg/dscm.

15.3. Include with the stationary source operating report required by Condition 205 the monthly average and maximum 3-hour rolling average H_2S concentration, as determined in Condition 15.2 for the period covered by the report.

15.4. Report as excess emissions in accordance with Condition 204, whenever the fuel combusted exceeds the sulfur content limit in Condition 15.

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[9] *Preconstruction Permit* refers to federal PSD permits, state-issued permits-to-operate issued on or before January 17, 1997 (these permits cover both construction and operations), construction permits issued on or after January 18, 1997, and minor permits issued on or after October 1, 2004.

[10] EU IDs 32A and 33A are diesel fuel-fired units that are subject to a more stringent Owner Requested Limit (ORL) of 0.0225 $wt\%S_{fuel}$ in diesel established under Minor Permit No. AQ0035MSS01 issued 4/23/07 (see Condition 18).

[11] For the purposes of this condition, Fuel Gas (FG) means a combination of refinery gas (RG), natural gas (NG) and liquefied petroleum gas (LPG) burned at the stationary source.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 3, June 29, 2022]

16. 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 0.01 percent H_2S by volume for NG (100 ppmv); and 0.01 percent sulfur by weight for LPG (100 ppmw). Monitor, record, and report as follows:

16.1. Monitor the sulfur content of NG and LPG at least once each month that the fuel is combusted directly (not mixed within the refinery fuel gas system which is monitored for H_2S content).

a. The owner or operator may elect not to monitor the total sulfur content of NG if it meets the definition of "natural gas" within 40 C.F.R. 60.331(u),[12] 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 NG, 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 NG 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.

b. 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 and LPG in accordance with Condition 16.1.c at least semiannually.

c. A minimum of three fuel samples shall be collected during the performance test. The testing shall be completed according to 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 gaseous fuels. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the prior approval of the Administrator.

[12] As defined in 40 C.F.R. 60.331(u), *natural gas* means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Equivalents of this in other units are as follows: 0.068 weight percent total sulfur, 680 parts per million by weight (ppmw) total sulfur, and 338 parts per million by volume (ppmv) at 20 degrees Celsius total sulfur. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

d. The fuel analyses required under Condition 16.1 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.

16.2. Keep records of the results of H_2S and total sulfur content obtained in Condition 16.1.

16.3. Include copies of the records required by Condition 16.2 with the operating report required under Condition 205 for the period covered by the report.

16.4. Report as excess emissions in accordance with Condition 204, whenever the fuel combusted exceeds the sulfur content limits in Condition 16.

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

For NO_x Emissions

17. 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 BACT 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

17.1. Monitor, record, and report as follows:

a. To ensure compliance with the NO_x BACT limits for EU IDs 6 through 9 and 11 in Table B, comply with the O_2 limits set out in Table D and associated MR&R requirements under Condition 20.

b. Maintain and operate low NO_x burner on EU ID 29 *[H-1701]*.

c. Conduct a NO_x and O_2 source test[13] 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 8 within the first applicable criteria below in the noted timeframe except as set out in Condition 17.1.c(i)(B):

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

(A) 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

(B) 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.

d. Conduct source tests required in Condition 17.1.c at no less than 80% of each unit's rated firing rate specified in Table A, 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. A single source test representative of both EU IDs 6 and 7 *[H-204 and H-205]* may be conducted on the units' common stack provided that both units are firing at no less than 80% of each units' rated firing rate specified in Table A or at the highest typical operating load of the unit.

e. Keep records of the results of source tests conducted under Condition 17.1.c, in accordance with Condition 200.

f. Report under Condition 198, the results of the source tests required in Condition 17.1.c.

g. Include with the operating report required under Condition 194 the results of source tests conducted during the reporting period.

h. Report as excess emissions, in accordance with Condition 204, if NO_x emissions exceeds any of the limits in Table B.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[Permit No. 9323-AA008 (amended), Condition 14a & 21 & Exhibit C, 11/18/96]
[Permit No. 9923-AC010 Rev. 1 Exhibits B(D) & C, 12/31/02]

[13] Per the Permittee's Off-Permit Change Notification dated January 24, 2019, in November 2018, Tesoro completed voluntary retrofits of EU IDs 27 and 28 existing burners with low-NO_x technology burners to lower the units' NO_x lb/MM Btu emission rate. Tesoro conducted source testing on December 11-12, 2018 for the stacks at EU IDs 27 and 28. Source test results of 0.047 lb/MMBtu NO_x and 0.057 lb/MMBtu NO_x while burning natural gas and fuel gas, respectively, for each heater demonstrate compliance with the NO_x emission limits for EU IDs 27 and 28 in Table B.

ORLs to Avoid PSD Classification as and To Protect Ambient Air Quality Standards

18. Fuel Sulfur Limit for EU IDs 32A and 33A.[14] The Permittee shall limit liquid fuel sulfur content for fuel combusted in EU IDs 32A and 33A *[GT-1400A and GT-1410A]* as listed in Table A to less than 0.0225 weight percent sulfur ($wt\%Sf_{uel}$) at all times. Monitor, record, and report as follows:

18.1. Analyze a representative sample of any fuel added to the tanks used to supply EU IDs 32A and 33A 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).

18.2. Except as indicated in Condition 18.3, 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 (as determined in Condition 18.1.)
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

18.3. 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 (S_A) is less than 0.0225 wt% S, then the Permittee may forego fuel sulfur content calculations in Condition 18.2 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 (S_A) is greater than 0.0225 wt% S, the Permittee shall either:

a. assume the fuel sulfur content of the fuel in the tank (S_B) is 0.0225 wt% S and calculate sulfur content of blended fuel in the tank (S_B) according to Condition 18.2; or

b. test the fuel sulfur content of the blended fuel in the tank (S_B) in accordance with Condition 18.1.

[14] Owner Requested Limit (ORL) to limit fuel sulfur to 0.0225 weight percent sulfur (wt% S) of diesel burned in EU IDs 32A and 33A is necessary to avoid classification as a PSD significant modification.

18.4. Keep records of results of each sulfur measurement required under Conditions 18.1 and 18.3.b, and each fuel sulfur calculation conducted under Condition 18.2.

18.5. Include the records required under Condition 18.4 with the operating report described in Condition 205.

18.6. If the sulfur content of the fuel combusted in either EU IDs 32A or 33A exceeds 0.0225 wt% S, report as excess emissions as described in Condition 204.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[Minor Permit No. AQ0035MSS01, Condition 7, 4/23/07]

19. NO_x Limits and Combustion Operations for EU IDs 2 and 10. The Permittee shall limit NO_x emissions from the crude heater, EU ID 2 *[H-101B]* and the Hydrocracker Fractionator Reboiler, EU ID 10 *[H-403N]* to no more than the limits indicated in Table C.

Table C – NO_x Emissions Limits, EU IDs 2 and 10

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

19.1. Monitor, record, and report as follows:

a. Maintain and operate low NO_x burners on EU IDs 2 and 10.

b. Conduct NO_x emission source tests on EU IDs 2 and 10 in accordance with Section 8 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

c. Conduct source tests under Condition 19.1.b at no less than 80% of each unit's rated firing rate specified in Table A, 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.

d. Report under Condition 198, the results of the source tests required in Condition 19.1.b

e. Report as excess emissions in accordance with Condition 204, if NO_x emissions in or O_2 concentration exceeds the limits in Table C and Table D.

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

[Permit No. 9923-AC010 Rev.1, Conditions 25, 26, 32.1 & 34.1, 12/31/02]

20. Operational Limits. The Permittee shall comply with the following:

20.1. Except during periods of planned startup,[15] planned shutdown,[16] and catalyst regeneration,[17] the Permittee shall not cause or allow three-hour rolling averages of O_2% content in the exhaust gas to exceed the operating limits for EU IDs 6 through 11 *[H-204, H-205, H-401, H-402, H-403N, and H-404]* indicated in Table D.

a. To ensure compliance with the short-term oxygen percent (O_2 %) content emission limits for EU IDs 6 through 11 shown in Table D, the Permittee shall comply with the following:

(i) Operate EU IDs 6 through 11 with an O_2 CPMS that continuously monitors the O_2% in the exhaust gas from EU IDs 6 through 11;

(ii) Install and certify the accuracy of the O_2 CPMS in accordance with 40 C.F.R. 60, Appendix B, Performance Specification 3; and

(iii) Demonstrate adherence to appropriate Quality Assurance procedures, as required in Condition 23, in the operation of and reporting of results for the O_2 CPMS.

[Minor Permit No. AQ0035MSS09, Condition 4, April 29, 2020]

20.2. During periods of planned startup, shutdown, and catalyst regeneration for EU IDs 6 through 11, the Permittee shall comply with the following work practice standards:

a. Increase excess O_2 only as reasonably needed to ensure safe operation;

b. Reduce heater firing (fuel gas consumption) when stable and if excess firing is unnecessary for the shutdown, startup, or regeneration activity at steady state; and

[15] For the purposes of this permit *planned startup* is defined as follows: (a) For the Powerformer heaters, EU IDs 6 and 7, *startup* begins when the Powerformer heaters begin to fire and ends when the Powerformer unit begins to send reformate to storage. At this point the Powerformer heaters are stable and in a normal steady-state operating mode; and (b) For the Hydrocracker heaters, EU IDs 8 through 11, *startup* begins when the Hydrocracker heaters begin to fire and ends when the Hydrocracker unit begins to send jet fuel to storage. At this point the hydrocracker heaters are stable and in a normal steady-state operating mode.

[16] For the purposes of this permit *planned shutdown* is defined as follows: (a) For the Powerformer heaters, EU IDs 6 and 7, *shutdown* begins when the Powerformer unit begins to send reformate to reject (does not meet product specifications) and ends when the Powerformer heaters are no longer firing. During this period, the heater duty of the Powerformer heaters begins to decrease until the heaters are no longer operating; and (b) For the Hydrocracker Heaters, EU IDs 8 through 11, *shutdown* begins when the Hydrocracker unit begins to send jet fuel to reject (does not meet product specifications) and ends when the hydrocracker heaters are no longer firing. During this period, the heater duty of the hydrocracker heaters begins to decrease until the heaters are no longer operating.

[17] For the purposes of this permit *catalyst regeneration* is defined as follows: *Catalyst regeneration* occurs during an operational period in which the catalyst is returned to its previous capability by injecting O_2 to burn coke and redistribute the catalyst active sites for a successful catalyst operating cycle. *Catalyst regeneration* occurs while the Powerformer unit is shutdown. As such, in line with the definitions for planned startup and shutdown of the Powerformer Heaters, *Catalyst regeneration* begins after the Powerformer unit completes the shutdown and ends before the Powerformer unit starts up.

c. Comply with the work practice standards and associated monitoring, recordkeeping, and reporting requirements set out under 40 C.F.R. 63, Subpart DDDDD for each of EU IDs 6 through 11, as provided in Condition 160.

[Minor Permit No. AQ0035MSS09, Condition 5, April 29, 2020]

20.3. Limit operational hours of EU IDs 34 through 37 and 39 through 41 *[EG-704, EG-801, P-605A, P-605B, P-708B, P-708C, and P-719C]* indicated in Table D.

a. To ensure compliance with the operational hour limits for EU IDs 34 through 37 and 39 through 41 *[EG-704, EG-801, P-605A, P-605B, P-708B, P-708C, and P-719C]* shown in Table D, the Permittee shall for each month monitor and record the following for each of the emissions unit:

(i) the monthly hours of operation; and

(ii) the total hours of operation per 12-month rolling period.

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 (wet basis) as measured in exhaust gas by CPMS
8	H-401	FG/NG/LPG	Not to exceed 7.7% O_2 (wet basis) as measured wet in exhaust gas by CPMS
9	H-402	FG/NG/LPG	Not to exceed 9.0% O_2 (wet basis) as measured wet in exhaust gas by CPMS
10	H 403N	FG/NG/LPG	Not to exceed 6% O_2 (wet basis) as measured in exhaust gas by CPMS
11	H 404	FG/NG/LPG	Not to exceed 8.8% O_2 (wet basis) as measured wet in exhaust gas by CPMS
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
39	P 708B	Diesel	600 hours per 12-month period
40	P 708C	Diesel	600 hours per 12-month period
41	P 719C	NG	1,000 hours per 12-month period

20.4. The Permittee shall report as follows:

a. For each month covered by the reporting period, include with the operating report under Condition 205 the following:

(i) the highest three-hour rolling average value of O_2 to the nearest tenth decimal place in percent for each of EU IDs 6 through 11, as recorded under Condition 20.1.a(i); and

(ii) the monthly and 12-month rolling hours of operation of each of EU IDs 34 – 37 and 39 – 41, as recorded under Condition 20.3.a.

b. Report under Condition 198, the results of the source tests required in Condition 17.1.c; and

c. Report under Condition 204 any exceedance or deviations from the operating limits in Table D.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[Permit No. 9323-AA008 (amended), Condition 14a & 21 and Exhibit C, 11/18/96]
[Permit No. 9923-AC010 Rev.1, Condition 29, and Exhibit B.A, C, & D.1&5, 12/31/02]
[Permit No. AQ0035CP04, Condition 2, 9/7/04]
[Minor Permit No. AQ0035MSS01, 4/23/07]
[Minor Permit No. AQ0035MSS09, Condition 4.2, April 29, 2020]

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*[18] used, the

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.

[18] 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 permits for the aggregated facilities (Kenai Refinery, Kenai Pipeline, and Nikiski Terminal) or insignificant sources as defined under 18 AAC 50.326(e) – (i).

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 205. 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. AQ0035CP04, Condition 3, 9/7/04]

22. Stack Height. The Permittee shall maintain the stack height of EU ID 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 AQ0035CP04, Condition 4, 9/7/04]
18 AAC 50.040(j) & 50.326(j)(4)]

23. Quality Assurance Plan (QAP). The Permittee shall maintain and comply with the approved Quality Assurance Plan developed to address the process monitoring requirements described in Conditions 15, 17, 20.1.a, 67, 72, 75, and 157. 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]

Section 5. Consent Decree Requirements

Enhanced Leak Detection and Repair (ELDAR) Program

24. No later than October 1, 2016, all *covered process units* subject to the equipment leak provisions of 40 C.F.R. Part 60, Subpart GGGa or 40 C.F.R. Part 63, Subpart CC at the Kenai Refinery shall be an "affected facility" for purposes of that standard. The requirements of Subpart GGG shall no longer apply prospectively to the covered process units.[19]

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 4, June 29, 2022]

25. NSPS Subpart GGGa/VVa Standards and MR&R Requirements. The Permittee shall comply with the applicable requirements of 40 C.F.R. 60.592a in Subpart GGGa by complying with the applicable standards and associated requirements set out in 40 C.F.R. §§60.482-1a to 60.487a in Subpart VVa, as specified in Conditions 112 – 124, for all covered process units at the Kenai Refinery.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 5, June 29, 2022]

NSPS Subparts J and Ja Requirements

26. H_2S Monitoring for the Refinery Flare and Fuel Gas System. By July 1, 2015, the Permittee shall:

26.1. Comply with the H_2S limits and corresponding MR&R requirements of NSPS Subpart J (for EU IDs 2 through 11, 17 through 20, 25, 27 through 29, 101, 115, and 116) under Conditions 66 through 68, NSPS Subpart Ja (for EU IDs 42 and 119) under Conditions 70 through 77, and the associated general requirements of NSPS 40 C.F.R. 60.1 – 60.19 Subpart A under Conditions 54 through 63 applicable to the Kenai Refinery Flare (EU ID 42) and Fuel Gas System (EU IDs 2 through 11, 17 through 20, 25, 27 through 29, 101, 115, 116, and 119);

26.2. Install, calibrate, maintain, and operate a high-range H_2S or Total Sulfur (TS) Continuous Monitoring System (CMS)[20] for the Refinery Flare (EU ID 42) and Fuel Gas System (EU IDs 2 through 11, 17 through 20, 25, 27 through 29, 101, 115, 116, and 119) in accordance with the following requirements:

a. The TS CMS monitor *(AI-8716)* for the flare system, EU ID 42, must be capable of satisfying the span value requirements set forth in NSPS Subpart Ja 40 C.F.R. 60.107a(e)(1)(i) (Cond 75.2.a(i)); and

[19] As of issuance of this permit, all "covered process units" at the Kenai Refinery have become subject to NSPS Subpart GGGa; therefore, they are no longer subject to NSPS Subpart GGG.

[20] The one-time requirement to upgrade the H_2S or TS CMS has been met (i.e., the installation of a high-range CMS, apart from the low range-CMS required under Subparts J and Ja), demonstrated, and reported in a semi-annual report by the Permittee, hence not included in Condition 26.2.

b. The H_2S CMS monitor (*AI-7408)* for the fuel gas system (EU IDs 2 through 11, 17 through 20, 27 through 29, 115, 116, and 119) must be capable of recording a range up to 3,000 ppm H_2S; and

26.3. Continuously operate the upgraded CMS monitors in accordance with 40 CFR 60.13(e) and Conditions 63.4, 67.1, 67.2, and 72.1.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 6, June 29, 2022]

Flaring Requirements

Instrumentation and Monitoring Systems for Flares

27. Evaluating and Upgrading or Replacing, as Necessary, Meters Measuring Sweep Gas and Purge Gas Volumetric Flow Rates. By no later than April 1, 2016, the Permittee shall complete an evaluation of all meters that measure the flow of Sweep Gas and Purge Gas to EU ID 42 *[J-801 flare]* and shall upgrade or replace, as necessary, each such meter in order to ensure an acceptable level of control overflow. Under no circumstances may the Permittee implement any such measure later than April 1, 2017, the due date for installation[21] of flare monitoring system.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 7, June 29, 2022]

28. Installation and Operation of Flare Monitoring Systems. By no later than April 1, 2017, the Permittee shall install, operate,calibrate, and maintain a monitoring system[22] capable of continuously measuring, calculating, and recording the Vent Gas Volumetric Flow Rate in the EU ID 42 *[J-801 flare]* header or headers that feed the flare as well as any Supplemental Gas used.

28.1. Different flow monitoring methods may be used to measure different gaseous streams that make up the Vent Gas provided that the flow rates of all gas streams that contribute to the Vent Gas are determined. The Permittee shall:

a. Install, operate, calibrate, and maintain a monitoring system capable of continuously measuring, calculating, and recording the volumetric flow rate of Assist Air used with EU ID 42 *[J-801 flare]*;[23] or

b. Continuously monitor Assist Air flow rates by continuously monitoring fan speed or power and using fan curves.

[21] The Permittee has installed an ultrasonic flow monitor with temperature and pressure correction on EU ID 42 in September 2016, prior to the required installation date of April 1, 2017. To improve flow monitoring and the associated combustion efficiency controls for Assist Air and Supplemental Gas, the refinery installed a new Vent Gas OSI flowmeter in February 2018. The new OSI optical flow meter serves as the refinery's primary Vent Gas flow meter.

[22] The Permittee has installed an ultrasonic flow monitor with temperature and pressure correction on EU ID 42 in September 2016, prior to the required installation date of April 1, 2017.

[23] EU ID 42 *[J-801 flare]* uses perimeter assist air only; thus, the perimeter assist air volumetric flow is equal to the volumetric flow rate of assist air.

28.2. The flow rate monitoring systems must be able to correct for the temperature and pressure of the system and output parameters in Standard Conditions.

28.3. Mass flow monitors may be used for determining volumetric flow rate of the Vent Gas. The mass Vent Gas flow rate can be converted to volumetric Vent Gas flow rate at Standard Conditions using Equation 2 (APPENDIX II, *Equation 6*) below:

Equation 2 $$Q_{vol} = \frac{Q_{mass} * 385.3}{MWt}$$

Where

Q_{vol} = Volumetric flow rate, standard cubic feet per second

Q_{mass} = Mass flow rate, pounds per second

MW_t = Molecular weight of the gas at the flow monitoring location, pounds per pound − mole

385.3 = Conversion factor, standard cubic feet per pound − mole

28.4. Mass flow monitors may be used for determining volumetric flow rate of Assist Air. Use Equation 2 to convert mass flow rates to volumetric flow rates of Assist Air. Use a molecular weight of 29 pounds per pound-mole for Assist Air.

28.5. Continuous pressure/temperature monitoring system(s) and appropriate engineering calculations may be used in lieu of a continuous volumetric flow monitoring system provided the molecular weight of the gas is known. For Assist Air, use a molecular weight of 29 pounds per pound mole. For Vent Gas, molecular weight must be determined using compositional analysis as specified in Condition 29.

[18 AAC 50.040(a)(1), (a)(2)(TT), (c)(10), & (j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[40 C.F.R. 60.107a(f), Subpart Ja]
[40 C.F.R. 63.640(s), 63.670(i)(1)- (i)(5), & 63.671, Subpart CC]
[Minor Permit No. AQ0035MSS07, Condition 8, June 29, 2022]

29. Flare Vent Gas Composition Monitoring. The Permittee shall determine the concentration of individual components in the Vent Gas using either one of the methods described in Conditions 29.1 or 29.2, to assess compliance with the operating limits in Condition 44.1 and, if applicable, Conditions 44.2 and 45. Alternatively, the Permittee may elect to directly monitor the Net Heating Value of the Vent Gas (NHVvg) following the method described in Condition 29.3, and, if desired, may directly measure the hydrogen concentration in the Vent Gas following the method described in Condition 29.4 below. The Permittee may elect to use different monitoring methods for different gaseous streams that make up the Vent Gas provided the composition or Net Heating Value of all gas streams that contribute to the Vent Gas are determined. Acceptable Methods are:

29.1. Net Heating Value by Gas Chromatograph. Except as provided in Conditions 29.5 and 29.6 below, the Permittee shall install, operate, calibrate, and maintain a monitoring system capable of continuously measuring (i.e., at least once every 15-minutes), calculating, and recording the individual component concentrations present in the Vent Gas.

29.2. Grab Sampling System. Except as provided in Conditions 29.5 and 29.6 below, the Permittee shall install, operate, and maintain a grab sampling system capable of collecting an evacuated canister sample for subsequent compositional analysis at least once every eight hours. Subsequent compositional analysis of the samples must be performed according to Method 18 of 40 C.F.R. Part 60, Appendix A-6, ASTM D6420-99 (Reapproved 2010), ASTM D1945-03 (Reapproved 2010), ASTM D1945-14 or ASTM UOP539-12.

29.3. Net Heating Value By Calorimeter. Except as provided in Conditions 29.5 and 29.6 below, the Permittee shall install, operate, calibrate, and maintain a calorimeter capable of continuously measuring, calculating, and recording NHVvg at Standard Conditions. When installed, the Net Heating Value calorimeter shall meet or exceed the applicable specifications and Calibration Standards and Quality Assurance requirements set forth in APPENDIX V.

29.4. Hydrogen Concentration Monitoring. If the Permittee uses a continuous Net Heating Value calorimeter according to Condition 29.3 above, the Permittee may, at its discretion, install, operate, calibrate, and maintain a monitoring system capable of continuously measuring, calculating, and recording the hydrogen concentration in the Vent Gas.

29.5. Monitoring Not Required for Pipeline Quality Natural Gas. Direct compositional monitoring or Vent Gas Net Heating Value calorimeter is not required for purchased ("pipeline quality") natural gas streams. The Net Heating Value of purchased natural gas streams may be determined using annual or more frequent grab sampling at any one representative location. Alternatively, the Net Heating Value of any purchased natural gas stream can be assumed to be 920 BTU/scf.

29.6. The Permittee may also assume a constant molecular weight and composition that have been demonstrated for the Sweep Gas, Purge Gas, or Supplemental Gas that is representative of the molecular weight and composition of natural gas, fuel gas or other appropriate gas supplied at EU ID 42 *[J-801 flare]*.

[18 AAC 50.040(a)(1), (c)(10), & (j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)((3) and (c)(6)]
[40 C.F.R. 63.670(j)(1) – (5) & 63.671, Subpart CC]
[Minor Permit No. AQ0035MSS07, Condition 9, June 29, 2022]

30. Video Camera. No later than April 1, 2017, the Permittee shall install and operate a video camera capable of recording, in digital format, whether a flame or Smoke Emissions are present at EU ID 42 *[J-801 flare]*.[24] It is not a violation of this Condition, however, if the video camera(s) cannot discern the Combustion Zone (as defined in APPENDIX I) and/or any Smoke Emissions (as defined in APPENDIX I) due to weather conditions, such as fog or snow, provided that records are created and retained.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 10, June 29, 2022]

[24] The video camera was installed in March 2017.

31. Additional Air-Assisted Flare Requirements. The Permittee shall undertake the following measures for EU ID 42 *[J-801 flare]* by no later than October 1, 2017:

31.1. Install a flow meter in order to determine the Vent Gas volumetric flow rate to air-assisted flares. The air flow rate shall be determined from the fan speeds or measured on the Assist Air blowers;[25]

31.2. Continue to operate a variable speed motor on the flares' Assist Air blowers; and

31.3. Install a control system[26] at the Kenai Refinery that will automate the control of the variable speed motor on EU ID 42's *[J-801 flare's]* Assist Air blowers to enable the Permittee to maintain the net heating value dilution parameter (NHVdil) limit in Condition 44.2.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 11, June 29, 2022]

32. Specifications and Quality Assurance/Quality Control (QA/QC) Requirements. The Permittee shall comply with the following instrumentation and monitoring systems specifications and QA/QC requirements:

32.1. The instrumentation and monitoring systems identified in Conditions 27 through 31 shall be able to produce and record data measurements and calculations for each parameter at the following time intervals as applicable to the instrumentation and monitoring system, as shown in Table F:

Table F – Instrumentation and Monitoring Systems Specifications

Instrumentation and Monitoring System	Recording and Averaging Times
Vent Gas flow; Vent Gas average molecular weight; Pilot Gas flow (if installed)	Measure continuously and record 15-minute Block Averages.
Video camera	Record at a rate of no less than 4 frames per minute.
Net heating value by gas chromatograph	Complete a minimum of one cycle of operation (sampling, analyzing and data recording) for each successive 15-minute Block Average Period.
Net heating value by calorimeter	Measure continuously and record 15- minute Block Averages.

a. Nothing in this Condition shall prohibit the Permittee from setting up process control logic that uses different averaging times from those in this table provided that the recording and averaging times in this table are available and used for determining compliance.

32.2. **QA/QC Requirements.** For EU ID 42 *[J-801 flare]* the applicable instrumentation and monitoring systems required per Conditions 27 through 32.1 shall meet or exceed the equipment and instrumentation technical specifications and quality assurance/quality control (QA/QC) requirements set forth in APPENDIX V.

[25] Tesoro uses the fan speeds to determine the air flow rate.
[26] The automatic control system was commissioned on September 20, 2017.

32.3. **Operation and Maintenance.** The Permittee shall operate each of the instruments and monitoring systems as required in Conditions 27 through 32.1 on a continuous basis when EU ID 42 *[J-801 flare]* is in Operation and Capable of Receiving Sweep, Supplemental, and/or Waste Gas, except for the following periods:

a. Malfunction of a monitoring system, for a monitoring system needed to meet the requirement(s);

b. Repairs associated with monitoring system malfunctions, for a monitoring system needed to meet the requirement(s); and

c. Required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments).

[18 AAC 50.040(a)(1) & (j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) and (c)(6)]
[40 C.F.R. 63.640(s), 63.670 & 63.671, Subpart CC]
[Minor Permit No. AQ0035MSS07, Condition 12, June 29, 2022]

33. Exception for Monitoring System Downtime. A failure to comply with the work practices or standards in Conditions 41.1, 44.1, 44.2, or 47 shall not constitute a violation of such work practice or standard if the noncompliance results from downtime of monitoring systems due to any of the periods specified in Conditions 32.3.a through 32.3.c; provided, however, that this exception shall no longer be applicable if the activities listed in Conditions 32.3.a through 32.3.c exceed 5% of time that EU ID 42 *[J-801 flare]* is In Operation and Capable of Receiving Sweep, Supplemental, and/or Waste Gas in any six month period for any instrument. The calculation of monitoring system downtime shall be made in accordance with 40 C.F.R. 60.13(h)(2) (Condition 63.5.a) and Paragraph VIII of APPENDIX V.

33.1. If the excepted periods in Conditions 32.3.a – 32.3.c above exceed 5% of the time that the flare is In Operation and Capable of Receiving Sweep, Supplemental, and/or Waste Gas in any six month period, the Permittee shall be entitled to assert that any period of downtime was justified under the circumstances and/or due to Force Majeure (as defined in APPENDIX I) and should not be counted as part of the 5% period of instrumentation and monitoring system downtime. Nothing in this Condition is intended to prevent the Permittee from claiming a Force Majeure defense to any period of instrumentation and/or monitoring system downtime. Nothing in this Condition supersedes or replaces the monitoring requirements, including operation, maintenance, and quality assurance/quality control requirements, of 40 C.F.R. Part 60, Subpart Ja. All such requirements shall apply in accordance with the terms set forth in 40 C.F.R. Part 60, Subpart Ja.

[18 AAC 50.040(a)(1) & (j) and 50.326(j)(4)]
[40 C.F.R. 63.640(s), 63.670 & 63.671, Subpart CC]
[40 C.F.R. 71.6(a)(3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 13, June 29, 2022]

Flare Gas Recovery System (FGRS)[27]

34. Capacity and Start-Up Dates. By no later than October 1, 2016,[28] the Permittee shall complete installation and commence operation of a Flare Gas Recovery System (FGRS) with a minimum operating design capacity of 80 kilo standard cubic feet per hour (KSCFH) for EU ID 42 *[J-801 flare]*. The FGRS will consist of a minimum of two compressors (EU IDs 126 and 127) with minimum operating capacities of 40 KSCFH each.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 14, June 29, 2022]

35. General Operation Requirements. The Permittee shall operate the FGRS in a manner to minimize waste gas to EU ID 42 *[J-801 flare]* while ensuring safe refinery operations. The Permittee also shall operate the FGRS consistent with good engineering and maintenance practices and in accordance with its design and the manufacturer's specifications.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 15, June 29, 2022]

36. Requirements Related to Compressors Being Available for Operation and/or In Operation. By no later than April 1, 2017, the Permittee shall comply with the following requirements when Potentially Recoverable Gas is being generated:

36.1. For each FGRS at the Kenai Refinery, the Permittee shall have

a. one compressor Available for Operation and/or In Operation 98% of the time; and

b. two compressors Available for Operation and/or In Operation 95% of the time.

36.2. Period to Be Used for Computing Percentage of Time. For purposes of calculating compliance with the 95% and the 98% of time that a compressor or group of compressors shall be Available for Operation and/or In Operation, as required by Condition 36.1, the period to be used shall be an 8,760-hour rolling sum, rolled hourly, using only hours when Potentially Recoverable Gas was generated during all or part of the hour but excluding hours for flows that could not have been prevented through reasonable planning and were in anticipation of or caused by a natural disaster, act of war or terrorism, or External Power Loss. When no Potentially Recoverable Gas was generated during an entire hour, then that hour shall not be used in computing the 8,760-hour rolling sum.

36.3. Periods of maintenance on and subsequent restart of the equipment within the FGRS that is shared by all compressors (for example, the liquid seal, the knock-out

[27] *Flare gas recovery system* means a system of one or more compressors, piping and the associated water seal, rupture disk or similar device used to divert gas from the flare and direct the gas to the fuel gas system or to a fuel gas combustion device. [Ref 40 C.F.R. 60.101a Subpart Ja]

[28] Tesoro has installed the FGRS and began its operation on September 21, 2016. The minimum operating design capacity of the FGRS meets the 80 KSCFH requirement.

drum, valves), such that the entire FGRS shall be shut down in order to undertake the maintenance, may be included in the amount of time that a compressor is Available for Operation; provided however, that these periods shall not exceed 1,344 hours in a five-year Rolling Sum Period, rolled daily. The Permittee shall use best efforts to schedule these maintenance activities during a scheduled turnaround of the flaring process units venting to EU ID 42 *[J-801 flare]*. To the extent it is not practicable to undertake these maintenance activities during a Scheduled Turnaround, the Permittee shall use best efforts to minimize the generation of waste gas during such periods.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 16, June 29, 2022]

Limitations on Flaring

37. Initial Limits. The Permittee shall comply with the following limits[29] on flaring of waste gas in EU ID 42 *[J-801 flare]*:

a. 30-day rolling average of 231,354 standard cubic feet per day (SCFD) by May 1, 2017, and

b. 365-day rolling average of 154,236 SCFD by April 1, 2018.

37.1. The rolling average period shall include only the prior 30 days or 365 days, as applicable, when EU ID 42 *[J-801 flare]* was In Operation.

37.2. Each exceedance of the 30-day or 365-day rolling average limits in Conditions 37.a and 37.b shall constitute one day of violation. An exceedance of either or both of the limits shall not prohibit ongoing refinery operations.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 17, June 29, 2022]

38. Requesting an Increase in the Limit. Once per calendar year, the Permittee may submit a request to EPA to increase the limitations on flaring set forth in Condition 37.

38.1. The Permittee may request an increase in the limit(s) and EPAwill approve[30] such an increase, only if:

a. The request is based on changes in crude capacity and/or complexity that were not reflected in the U.S. Energy Information Administration (EIA) reports as of June 25, 2014;

b. The changes are or will be permitted by the Department; and

[29] The limitations in Condition 37 were calculated using the equations set forth in Conditions 38.1.d(i)(A) and 38.1.d(i)(B); APPENDIX VII sets forth the actual calculation. The crude capacity used in the calculation was taken from the "Total Operable" atmospheric crude oil distillation capacity, in barrels per calendar day, found in Part 5, Code 401, of the Form EIA-820 that the Permittee submitted to the U.S. Energy Information Administration ("EIA") for EIA's report dated June 25, 2014. A copy of that Form is included in APPENDIX VII. The "*Refinery Complexity*" and "*Industry Avg Complexity*" were calculated pursuant to the methodology set forth in APPENDIX VI.

[30] The EPA shall evaluate any request under Condition 38 on the basis of consistency with Conditions 38.1 and 38.2.

c. The changes in crude capacity and/or complexity result in new limit(s) that are at least 20% higher than the limits set forth in Condition 37.

d. In any such request, the Permittee shall propose

(i) new limit(s) (hereafter referred to as "New Limit(s) Based on Projections") based upon the following equations:

(A) the refinery-wide, 30-day Rolling Average Limit:

Equation 3 Refinery Flaring ≤ 750,000 SCFD * *Refinery Crude Cap*/100,000 bpd * *Refinery Complexity*/ *Industry Avg Complexity*

(B) the refinery-wide, 365-day Rolling Average Limit:

Equation 4 Refinery Flaring ≤ 500,000 SCFD * *Refinery Crude Cap*./100,000 bpd * *Refinery Complexity*/ *Industry Avg Complexity*

38.2. For purposes of the equations in Conditions 38.1.d(i)(A) and 38.1.d(i)(B) above, the following shall apply:

a. The items in *italics* are variables that will change over time.

b. The Permittee's crude capacity shall be determined as follows:

(i) If the modification does not affect the crude capacity, the Atmospheric Crude Oil Distillation Capacity, in barrels per day, that the refinery reported under "Total Operable" capacity on Part 5, Code 401, of the Applicable Form EIA-820; to the extent that the "Parts" or "Codes" on form EIA-820 change in the future, the intent of the Parties is that the "Parts" and "Codes" of future forms that correspond most closely to those found on the Form EIA-820 for its report dated June 25, 2014 will be used; or

(ii) If the modification does affect crude capacity, the projected, new capacity set forth in the air permit application(s) for the modification after July 18, 2016.

c. The Permittee's Complexity shall be calculated in accordance with *Equation 1* of APPENDIX VI.

d. The Permittee shall certify the accuracy of the projected crude capacity and/or flaring process unit capacities used to support the calculations.

e. The Industry Average Complexity shall be calculated in accordance with *Equation 2* of APPENDIX VI.

38.3. Nothing in this condition shall be construed to relieve the Permittee of an obligation to evaluate, under applicable PSD and NNSR requirements, an increase in a refinery-wide limit on flaring.

38.4. The new limit(s) based on projections shall take effect, if ever, beginning on the later of the date that EPA approves the request or a dispute is resolved in the Permittee favor or the date(s) specified in the modification permit(s).

38.5. In the event that the Permittee amend, modify or withdraw the air permit application(s) that is/are the basis for the new limit(s) based on projections requested pursuant to Condition 38 in a manner that affects the limit(s) calculation(s), the Permittee shall, within fifteen (15) Days of amending, modifying, or withdrawing its air permit application(s), revise or withdraw its request under Condition 38.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 18, June 29, 2022]

39. Consequences of a Mistake in Projected Capacities. By no later than ninety (90) days after the startup of the permitted modifications, the Permittee shall determine whether the projected "Refinery Crude Capacity" or the projected capacities for new or modified units that the Permittee relied upon pursuant to Conditions 38.2.b and 38.2.c, respectively, were or are different from the actual capacities that the Permittee have reported or will report to the EIA or the Oil & Gas Journal after the Startup of the permitted modification. If there are differences, the Permittee shall re-calculate the flaring limitation(s) using the actual capacities that the Permittee have reported or will report to the EIA or the Oil & Gas Journal (hereafter referred to as "New Limit(s) Based on Actuals").

39.1. If the new limit(s) based on actuals that the Permittee calculate under Condition 39 is/are greater than the new limit(s) based on projections that the Permittee calculated under Condition 38, then the Permittee shall either:

a. take no further action, the new limits(s) based on projections shall remain in effect; or

b. may elect to submit for EPA approval, a revised, recalculated new limit(s) based on actuals to EPA; after submission to EPA, the Permittee shall secure EPA's approval of the new limit(s) based on actuals before they become effective.

39.2. If the new limit(s) based on actuals that the Permittee calculates under Condition 39.1.b is/are less than the new limit(s) based on projections that the Permittee calculated under Condition 38, then by no later than ninety (90) Days after the startup of the permitted modifications, the Permittee shall:

a. commence complying with the new limit(s) based on actuals calculated under Condition 39.1.b; and

b. submit the revised, recalculated new limit(s) based on actuals to the EPA. After submission to EPA, the Permittee shall consult with EPA about the new limit(s) based on actuals.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 19, June 29, 2022]

40. Meaning and Calculation of "Waste Gas Flow" for Purposes of the Limitation on Flaring. For purposes of the meaning and calculation of "Waste Gas Flow" in the limitations on flaring in Conditions 37 and 38 and any revised limitations on flaring developed, the following shall apply:

40.1. To the extent that the Permittee has instrumentation capable of measuring the volumetric flow rate of hydrogen, nitrogen, oxygen, carbon monoxide, carbon dioxide, and/or water (steam) in the Waste Gas, the contribution of all measured flows of any of these elements/compounds may be excluded from the Waste Gas flow rate calculation.

40.2. Waste Gas flows during all periods (including but not limited to normal operations and periods of Startup, Shutdown, Malfunction, process upsets, relief valve leakages, power losses due to an interruptible power service agreement, and emergencies arising from events within the boundaries of the refinery) shall be included. Waste Gas flows that could not be prevented through reasonable planning and are caused by a natural disaster, act of war or terrorism, or External Power Loss may be excluded from the calculation of flow rate.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 20, June 29, 2022]

Flare (EU ID 42) Emissions Standards, Work Practice, and Monitoring Requirements

41. Combustion Efficiency Requirements. The Permittee shall comply with the following combustion efficiency requirements at EU ID 42 *[J-801 flare]*:

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 21, June 29, 2022]

41.1. Operation During Waste Gas Venting. By no later than April 1, 2016, the Permittee shall operate EU ID 42 *[J-801 flare]* at all times when Waste Gas may be vented to it.

[40 C.F.R. 60.18(e) Subpart A]
[40 C.F.R. 60.592a(a) Subpart GGGa and 60.482-10a(m) Subpart VVa]

41.2. Flare Combustion Efficiency 96.5%. By no later than October 1, 2017, the Permittee shall operate EU ID 42 *[J-801 flare]*, with a minimum of a 96.5% Combustion Efficiency, as calculated in APPENDIX II, *Equation 1*, at all times when Waste Gases are vented to the flare. To demonstrate continuous compliance with the applicable combustion efficiency requirement, the Permittee shall operate EU ID 42 *[J-801 flare]* within the range of relevant operating parameters set forth in Conditions 44.1 and 44.2.

a. The requirements of Conditions 41.2, 44.1, and 44.2 are not applicable to EU ID 42 *[J-801 flare]* when the only gases being vented to the flare are Pilot Gas and/or Purge Gas. Pilot Gas and Purge Gas will be considered to be the only gases being vented to EU ID 42 *[J-801 flare]* if the following conditions are satisfied for the liquid seal drum that is part of the FGRS associated with the flare:

(i) For the liquid seal drum associated with EU ID 42 *[J-801 flare]*, the pressure difference between the inlet pressure and outlet pressure is less than the liquid seal pressure as set by the static head of liquid between the opening of the dip tube in the drum and the level-setting weir in the drum;

(ii) For the liquid seal drum associated with EU ID 42 *[J-801 flare]*, the liquid level in the drum is at the level of the weir; and

(iii) Downstream of the seal drum associated with EU ID 42 *[J-801 flare]* there is no flow of Supplemental Gas directed to the flare.

b. As an alternative to Condition 41.2.a above, for a flare which does not have a weir, Pilot Gas and Purge Gas will be considered to be the only gases being vented to those flares if the Vent Gas flow meter indicates a flow rate of less than 0.2 feet/second based on a 15-minute Block Average.

[40 C.F.R. 63.670(r), Subpart CC]

42. Pilot Flame Presence. By January 30, 2019, the Permittee shall operate EU ID 42 *[J-801 flare]* with a pilot flame present at all times when EU ID 42 *[J-801 flare]* is in operation. The flame presence standard is not met if, during any 15-minute block, there is at least one minute where no pilot flame is present when Vent Gas is routed to EU ID 42 *[J-801 flare]*.

42.1. The Permittee shall continuously monitor the presence of the pilot flame(s) using a device (including, but not limited to, a thermocouple, ultraviolet beam sensor, or infrared sensor) capable of detecting that the pilot flame(s) is present.

[18 AAC 50.040(a)(2)(UU) & (VV), 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 22, June 29, 2022]
[40 C.F.R. 63.640(s) and 63.670(b) & (g), Subpart CC]
[40 C.F.R. 60.592a(a) & (d), Subpart GGGa; 60.482-10a(d) and 60.485a(g), Subpart VVa]

43. No Visible Emissions. By January 30, 2019, the Permittee shall

43.1. specify the smokeless design capacity of EU ID 42 *[J-801 flare]* and operate with no Visible Emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours, when the Vent Gas flow rate is less than the smokeless design capacity of EU ID 42 *[J-801 flare]*;

43.2. monitor for Visible Emissions from EU ID 42 *[J-801 flare]*, while the unit is in operation, as follows:

a. conduct an Initial Visible Emissions observation using Method 22 at 40 C.F.R. Part 60, Appendix A-7 for a period of 2 hours;

b. conduct subsequent Visible Emissions observations using either Condition 43.2.b(i) or Condition 43.2.b(ii):

(i) at least once per Day, the Permittee shall conduct Visible Emissions observations using Method 22 at 40 C.F.R. Part 60, Appendix A-7 for a period of 5 minutes;

(A) if, at any time, the Permittee sees Visible Emissions, even if the minimum required daily Visible Emissions monitoring has already been performed, the Permittee shall immediately begin an observation period of 5 minutes using Method 22 at 40 C.F.R. Part 60, Appendix A-7;

(B) if Visible Emissions are observed for more than one continuous minute during any 5-minute observation period, the Permittee shall extend the observation period using Method 22 at 40 C.F.R. Part 60, Appendix A-7 to 2 hours or until 5-minutes of No Visible Emissions are observed; or

(ii) use a video surveillance camera to continuously record (at least one frame every 15 seconds with time and date stamps) images of the flare flame and a reasonable distance above the flare flame at an angle suitable for Visual Emissions observations. The Permittee must provide real-time video surveillance camera output to the control room or other continuously manned location where the camera images may be viewed at any time; and

43.3. record and report any instances where Visible Emissions are observed, in accordance with Conditions 43.2.a and 43.2.b(i), for more than 5 minutes during any 2 consecutive hours, including the date and time of the 2-hour period and an estimate of the cumulative number of minutes in the 2-hour period for which emissions were visible.

[18 AAC 50.040(a)(2)(UU) & (VV), 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[40 C.F.R. 63.640(s), 63.670(c) & (h), and 63.655(g)(11)(ii) & (i)(9)(ii)(C), Subpart CC]
[40 C.F.R. 60.592a(d), Subpart GGGa; 60.485a(g), Subpart VVa]
[Minor Permit No. AQ0035MSS07, Condition 23, June 29, 2022]

44. Net Heating Value Standards for EU ID 42 *[J-801 flare]*. By no later than October 1, 2017, for EU ID 42 *[J-801 flare]*, the Permittee shall comply with the following operational limits and monitoring requirements when gases aside from Pilot Gas and/or Purge Gas are routed to the flare:

[18 AAC 50.040(a)(1), (c)(10), (j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[40 C.F.R. 63.640(s), 63.670(e), (f), (m) & (n), Subpart CC]
[Minor Permit No. AQ0035MSS07, Condition 24, June 29, 2022]

44.1. Net Heating Value of Combustion Zone Gas (NHVcz). The Permittee shall operate EU ID 42 *[J-801 flare]* to maintain the NHVcz at or above 270 British Thermal Units per standard cubic feet (BTU/scf) determined on a 15-minute Block Average Period basis when gases aside from Pilot Gas and/or Purge Gas are routed to the flare. The Permittee shall determine the NHV_{cz} as specified in Condition 44.1.a or 44.1.b, as applicable, as follows:

a. Direct Calculation Method. Except as specified in Condition 44.1.b, determine the 15-minute Block Average NHVcz based on the 15-minute

Block Average Vent Gas and assist gas flow rates using Equation 5 (APPENDIX III, *Equation 3*) below. For periods when there is no Premix Assist Air flow, NHVcz = NHVvg.

Equation 5 $$NHV_{cz} = \frac{(Q_{vg} * NHV_{vg})}{(Q_{vg} + Q_s + Q_{a,premix})}$$

Where:

NHV_{cz}	=	Net heating value of Combustion Zone Gas, BTU/scf.
NHV_{vg}	=	Net heating value of Vent Gas for the 15-minute Block Period, BTU/scf.
Q_{vg}	=	Cumulative volumetric flow of Vent Gas during the 15-minute Block Period, scf.
Q_s	=	Cumulative volumetric flow of Total Steam during the 15- minute Block Period, scf.
$Q_{a,premix}$	=	Cumulative volumetric flow of Premix Assist Air during the 15-minute Block Period, scf.

b. Feed Forward Calculation Method. When monitoring gas composition or net heating value in a location representative of the cumulative Vent Gas stream, and when directly monitoring Supplemental Gas flow additions to EU ID 42 *[J-801 flare]*, the Permittee shall determine the 15-minute Block Average NHVcz using Equation 6 (APPENDIX III, *Equation 4*) below:

Equation 6 $$NHV_{cz} = \frac{(Q_{vg} - Q_{NG2} + Q_{NG1}) * NHV_{vg} + (Q_{NG2} - Q_{NG1}) * NHV_{NG}}{(Q_{vg} + Q_s + Q_{a,premix})}$$

Where:

NHVcz	=	Net heating value of Combustion Zone Gas, BTU/scf.
NHV_{vg}	=	Net heating value of Vent Gas for the 15-minute Block Period, BTU/scf.
Q_{vg}	=	Cumulative volumetric flow of Vent Gas during the 15-minute Block Period, scf.
Q_{NG2}	=	Cumulative volumetric flow of Supplemental Gas to the flare during the 15-minute Block Period, scf.
Q_{NG1}	=	Cumulative volumetric flow of Supplemental Gas to the flare during the previous 15-minute Block Period, scf. For the first 15-minute Block Period of an event, use the volumetric flow value for the current 15-minute Block Period, i.e., QNG1=QNG2.
NHV_{NG}	=	Net heating value of Supplemental Gas to the flare for the 15-minute Block Period determined according to the requirements in Condition 29.5, BTU/scf.

Q_s = Cumulative volumetric flow of Total Steam during the 15-minute Block Period, scf.

$Qa_{,premix}$ = Cumulative volumetric flow of Premix Assist Air during the 15-minute Block Period, scf.

[40 C.F.R. 63.640(s), 63.670(e) and (m)(1) & (2), Subpart CC]
[Minor Permit No. AQ0035MSS07, Condition 24.1, June 29, 2022]

44.2. Net Heating Value Dilution Parameter (NHVdil), Perimeter Assist Air. The Permittee shall operate EU ID 42 *[J-801 flare]* to maintain the NHVdil at or above 22 British Thermal Units per square foot (BTU/ft^2) determined on a 15-minute Block Average basis when gases aside from Pilot Gas and/or Purge Gas are routed to the flare. The Permittee shall determine the NHVdil only during periods when the Perimeter Assist Air is used and as specified in Condition 44.2.a or 44.2.b, as applicable, as follows:

a. Direct Calculation Method. Except as specified in Condition 44.2.b, determine the 15-minute Block Average NHVdil based on the 15-minute Block Average Vent Gas and Perimeter Assist Air flow rates using Equation 7 (APPENDIX III, *Equation 5*) below. For 15-minute Block Periods when there is no cumulative volumetric flow of Perimeter Assist Air, the 15-minute Block Average NHVdil parameter does not need to be calculated.

Equation 7 $$NHVdil = \frac{(Q_{vg} * Diam * NHV_{vg})}{(Q_{vg} + Q_s + Qa._{premix} + Q_{a.perimeter})}$$

Where:

NHV_{dil} = Net heating value dilution parameter, BTU/ft2.
NHV_{vg} = Net heating value of Vent Gas determined for the 15 − minute Block Period, BTU/scf.
Q_{vg}: = Cumulative volumetric flow of Vent Gas during the 15 − minute Block Period, scf.
Diam: = Effective diameter of the unobstructed cross sectional area of the flare tip for Vent Gas flow, ft.
Q_s: = Cumulative volumetric flow of Total Steam during the 15 − minute Block Period, scf.
$Q_{a.\,premix}$: = Cumulative volumetric flow of Premix Assist Air during the 15 − minute Block Period, scf.
$Q_{a.\,perimeter}$ = Cumulative volumetric flow of Perimeter Assist Air during the 15 − minute Block Period, scf.

b. Feed-Forward Calculation Method. When monitoring gas composition or net heating value in a location representative of the cumulative Vent Gas stream and when directly monitoring Supplemental Gas flow additions to EU ID 42 [*J-801 flare]*, the Permittee shall determine the 15-minute Block Average NHV_{dil} using Equation 8 (APPENDIX III, *Equation 6*) below. For 15-minute Block Periods when there is no cumulative volumetric flow of Perimeter

Assist Air, the 15-minute Block Average NHV_{dil} parameter does not need to be calculated.

Equation 8 $$NHV_{dil} = \frac{[(Q_{vg}-Q_{NG2}+Q_{NG1})*NHV_{vg}+(Q_{NG2}-Q_{NG1})*NHV_{NG}]*Diam}{(Q_{vg}+Q_{s}+Q_{a.premix}+Q_{a.perimeter})}$$

Where:

NHV_{dil} = Net heating value dilution parameter, BTU/ft2.
NHV_{vg} = Net heating value of Vent Gas determined for the 15 − minute Block Period, BTU/scf.
Q_{vg} = Cumulative volumetric flow of Vent Gas during the 15 − minute Block Period, scf
Q_{NG2} = Cumulative volumetric flow of Supplemental Gas to the flare during the 15 − minute block period, scf.
Q_{NG1} = Cumulative volumetric flow of Supplemental Gas to the flare during the previous 15 − minute block period, scf. For the first 15 − minute Block Period of an event, use the period, i. e. , QNG1 = QNG2.
NHV_{NG} = Net heating value of Supplemental Gas to the flare for the 15 − minute Block Period determined according to the requirements in Condition 29.5 , BTU/scf.
Diam = Effective diameter of the unobstructed cross sectional area of the flare tip for Vent Gas flow, ft.
Q_s: = Cumulative volumetric flow of Total Steam during the 15 − minute Block Period, scf.
$Q_{a.\,premix}$: = Cumulative volumetric flow of Premix Assist Air during the 15 − minute Block Period, scf.
$Q_{a.\,perimeter}$ = Cumulative volumetric flow of Perimeter Assist Air during the 15 − minute Block Period, scf.

[40 C.F.R. 63.640(s), 63.670(f), and (n)(1) & (2), Subpart CC]
[Minor Permit No. AQ0035MSS07, Condition 24.2, June 29, 2022]

45. Flare Tip Velocity (Vtip). By January 30, 2019, for EU ID 42 *[J-801 flare]*, provided that the appropriate monitoring systems are in place, whenever the Vent Gas flow rate is less than the smokeless design capacity of the flare, the Permittee shall comply with either of the methods described in Condition 45.1 or Condition 45.2:

[18 AAC 50.040(c)(10) & (j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[40 C.F.R. 63.670(d), (k), & (l), Subpart CC]
[Minor Permit No. AQ0035MSS07, Condition 25, June 29, 2022]

45.1. Except as provided in Condition 45.2, the actual Vtip must be less than 60 feet per second. The Permittee shall monitor Vtip using the procedures specified in Condition 45.4 below.

[Minor Permit No. AQ0035MSS07, Condition 25.1, June 29, 2022]

45.2. Vtip must be less than 400 feet per second and also less than the maximum allowed flare tip velocity (Vmax) as calculated according to the following equation (APPENDIX II, *Equation 5*):

Equation 9 $\text{Log}_{10}\, V_{max} = (NHV_{vg} + 1{,}212)/850$

Where:

V_{max}: Maximum allowed flare tip velocity, ft/sec
NHV_{vg}: Net heating value of Vent Gas, BTU/scf, as determined by equations listed in Condition 29.3,
1,212: Constant.
850: Constant.

[40 C.F.R. 63.670(d)(2), Subpart CC]
[Minor Permit No. AQ0035MSS07, Condition 25.2, June 29, 2022]

45.3. The Permittee shall monitor Vtip using the procedures specified in Condition 45.4 below and monitor gas composition and determine NHVvg using the procedures specified in Condition 29 and the following equations (from APPENDIX III, *Equations 1 and 2*):

Equation 10 $NHVvg = \sum_{i=1}^{n}(xi * NHVi)$

Where:

NHV_{vg} = Net heating value of Vent Gas, BTU/scf.
i = Individual component in Vent Gas.
n = Number of components in Vent Gas.
x_i = Concentration of component i in Vent Gas, volume fraction.
NHV_i = Net heating value of component i according to Table 1 to APPENDIX III, BTU/scf. If the component is not specified in Table 1 to APPENDIX III, the heats of combustion may be determined using any published values where the net enthalpy per mole of offgas is based on combustion at 25 °C and 1 atmosphere (or constant pressure) with offgas water in the gaseous state, but the standard temperature for determining the volume corresponding to one mole of Vent Gas is 20° C.

Equation 11 $NHVvg = NHVmeasured + 938xH2$

Where:

NHV_{vg} = Net heating value of Vent Gas, BTU/scf.

$NHV_{measured}$ = Net heating value of Vent Gas stream as measured by the continuous net heating value calorimeter, BTU/scf.

X_{H2} = Concentration of hydrogen in Vent Gas at the time the sample was input into the net heating value calorimeter, volume fraction.

938 = Net correction for the measured heating value of hydrogen (1,212 – 274), BTU/scf.

[40 C.F.R. 63.670(l)(1) & (3), Subpart CC]
[Minor Permit No. AQ0035MSS07, Condition 25.3, June 29, 2022]

45.4. *Calculation Methods for Cumulative Flow Rates and Determining Compliance with Vtip Operating Limits.* The Permittee shall determine Vtip on a 15-minute Block Average basis according to the following requirements:

a. The unobstructed cross sectional area of the flare tip is the total tip area that Vent Gas can pass through. This area does not include any stability tabs, stability rings, and Upper Steam or air tubes because Vent Gas does not exit through them.

b. The Permittee shall determine the cumulative volumetric flow of Vent Gas for each 15-minute Block Average Period using the data from the continuous flow monitoring system required in Condition 27 according to the following requirements as applicable.

(i) Use set 15-minute time periods starting at 12 midnight to 12:15 a.m., 12:15 a.m. to 12:30 a.m. and so on concluding at 11:45 p.m. to midnight when calculating 15-minute Block Average flow volumes.

(ii) If continuous pressure/temperature monitoring system(s) and engineering calculations are used as allowed under Condition 28.4, the Permittee shall, at a minimum, determine the 15-minute Block Average temperature and pressure from the monitoring system and use those values to perform the engineering calculations to determine the cumulative flow over the 15-minute Block Average period. Alternatively, the Permittee may divide the 15-minute Block Average Period into equal duration subperiods (e.g., three 5-minute periods) and determine the average temperature and pressure for each subperiod, perform engineering calculations to determine the flow for each subperiod, then add the volumetric flows for the subperiods to determine the cumulative.

c. The 15-minute Block Average Vtip shall be calculated using the volumetric flow of Vent Gas for the 15-minute Block Average Period, as in the following equation (from APPENDIX II, *Equation 7*):

Equation 12 $V_{tip} = \frac{Q_{cum}}{(Area * 900)}$

Where:

V_{tip}	=	Flare Tip Velocity, feet per second.
Q_{cum}	=	Cumulative volumetric flow over 15-minute Block Average Period, actual cubic feet.
Area	=	Unobstructed cross sectional area of the flare tip, square feet.
900	=	Conversion factor, seconds per 15-minute Block Average

45.5. If the Permittee choose to comply with Condition 45.4.b(ii) above, the Permittee shall also determine the NHVvg using Equation 10 and Equation 11 and calculate Vmax using Equation 9 in order to compare Vtip to Vmax on a 15-minute Block Average basis.

[40 C.F.R. 63.670(k)(1) - (4), Subpart CC]
[Minor Permit No. AQ0035MSS07, Conditions 25.4 & 25.5, June 29, 2022]

46. Good Air Pollution Control Practices. At all times, including during periods of Startup, Shutdown, and/or Malfunction, the Permittee shall implement good air pollution control practices to minimize emissions from EU ID 42 *[J-801 flare]*; provided however, that the Permittee shall not be in violation of this requirement for any practice that Conditions 27 through 50 requires the Permittee to implement after September 28, 2016 for the period between July 18, 2016 and the implementation date or compliance date (whichever is applicable) for the particular practice.

[18 AAC 50.040(c)(10) & (j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 26, June 29, 2022]

47. Flare Work Practice Standards. By no later than April 1, 2017, for EU ID 42 *[J-801 flare]*, utilize the instrumentation and controls required to be installed pursuant to Conditions 27 through 32. The Permittee shall install and operate on an Automatic Control System[31] that shall automate the control of the Supplemental Gas flow rate to EU ID 42 *[J-801 flare]*.

[18 AAC 50.040(c)(10) & (j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 27, June 29, 2022]

48. Flare Operation According to Design. By no later than April 1, 2016, for EU ID 42 *[J-801 flare]*, the Permittee shall operate and maintain the flare in accordance with its design, except if, and only to the extent that, operation and maintenance of the flare in conformance with its design, conflicts with compliance with one or more permit

[31] The automatic control of the supplemental gas system was installed in March 2017.

conditions. The requirements of this condition shall not apply to the extent necessary to achieve personnel and process safety or prevent equipment damage.

[18 AAC 50.040(a)(1), (a)(2)(UU) & (VV), 50.040(j), and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) and (c)(6)]
[40 C.F.R. 60.18(d), Subpart A]
(40 C.F.R. 60.592a(a), Subpart GGGa & 60.482-10a(d) & (e), Subpart VVa]
[Minor Permit No. AQ0035MSS07, Condition 28, June 29, 2022]

49. Portable Flares. The Permittee shall comply with the following when using Portable Flares as replacement for EU ID 42 *[J-801 flare]*:

49.1. *Distinction Between Planned and Unplanned Outages of Flares.* For purposes of this permit term, a "planned" outage shall mean an outage of EU ID 42 [J-801 flare] that is scheduled 30 Days or more in advance of the outage. An "unplanned" outage is an outage of EU ID 42 *[J-801 flare]* that either is scheduled less than 30 Days in advance or is unscheduled.

49.2. *504 Hours or Less.* For any planned or unplanned outage of EU ID 42 *[J-801 flare]* that the Permittee know or reasonably anticipate will result in 504 hours or less of downtime on a 1095-day Rolling Sum Period, rolled daily, the Permittee shall make good faith efforts to ensure that the Portable Flare that replaces EU ID 42 *[J-801 flare]* complies with all of the Permit Conditions that are applicable to EU ID 42 *[J-801 flare]* that the Portable Flare replaces.

49.3. More than 504 Hours:

a. Planned. For any planned outage of a flare that the Permittee know or reasonably can anticipate will last 504 hours or more on a 1095-day Rolling Sum Period, rolled daily, the Permittee shall ensure that the Portable Flare complies with all of the Permit Conditions related to EU ID 42 *[J-801 flare]* that it replaces as of the date that the Portable Flare is In Operation and Capable of Receiving Waste, Supplemental, and/or Sweep Gas.

b. Unplanned. For any unplanned outage of EU ID 42 *[J-801 flare]* that, in advance of the outage, the Permittee cannot reasonably anticipate will last longer than 504 hours, the Permittee shall ensure that the Portable Flare complies with all of the Permit Conditions related to EU ID 42 *[J-801 flare]* that it replaces by no later than 30 Days after the date that the Permittee know or reasonably should have known that the outage will last 504 hours or more.

49.4. *Recordkeeping.* The Permittee shall keep records in accordance with Conditions 50.4.j and 50.5.

[Minor Permit No. AQ0035MSS07, Condition 29, June 29, 2022]

Flare Recordkeeping

50. The Permittee shall comply with the following recordkeeping requirements:

[18 AAC 50.040(c)(10) & (j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(ii) and (c)(6)]
[40 C.F.R. 63.655(i)(9) and 63.670(p), Subpart CC]
[Minor Permit No. AQ0035MSS07, Condition 30, June 29, 2022]

50.1. By no later than October 1, 2017 for EU ID 42 *[J-801 flare]*, the Permittee shall calculate and record, in accordance with the recording and averaging times required in Condition 32.1, as applicable, each of the following parameters:

a. NHV_{cz} (in BTU/scf); and

b. NHV_{vg} (in BTU/scf).

50.2. By no later than October 1, 2017, EU ID 42 *[J-801 flare]*, commencing if and when the downtime of any instrumentation and monitoring system subject to Condition 32.3 above exceeds 5% of the time that the flare is In Operation and Capable of Receiving Sweep, Supplemental, and/or Waste Gas in any six month period for the flare that is being monitored by the respective instrument, the Permittee shall record

a. the duration of the deviation,

b. an explanation of the cause(s) of the deviation, and

c. a description of the corrective action(s) that the Permittee took.

50.3. At any time that the Permittee deviates from the standards in Conditions 41 through 46 the Permittee shall record

a. the duration of the deviation,

b. an explanation of the cause(s) of the deviation, and

c. a description of the corrective action(s) that the Permittee performed.

50.4. Keep records of the following:

a. Output of the monitoring device used to detect the presence of a pilot flame as required in Condition 42, for a minimum of 2 years.

b. Each 15-minute block during which there was at least one minute that no pilot flame is present when regulated material is routed to a flare, for a minimum of 5 years.

[40 C.F.R. 63.655(i)(9)(i), Subpart CC]

c. Daily Visible Emissions observations or video surveillance images required in Condition 43.2, for a minimum of 3 years.

(i) If Visible Emissions observations are performed using Method 22 at 40 C.F.R. Part 60, Appendix A-7, the record must identify

(A) whether the Visible Emissions observation was performed,

(B) the results of each observation,

(C) total duration of observed Visible Emissions,

(D) whether it was a 5-minute or 2-hour observation, and

(E) if the Permittee performs Visible Emissions observations more than one time during a day, the date and time of day each Visible Emissions observation was performed.

[40 C.F.R. 63.655(i)(9)(ii)(A), Subpart CC]

(ii) If video surveillance camera is used pursuant to Condition 30, include all video surveillance images recorded, with time and date stamp and retain the data recorded for six months.

[40 C.F.R. 63.655(i)(9)(ii)(B), Subpart CC]

(iii) For each 2-hour period for which visible emissions are observed for more than 5 minutes in 2 consecutive hours, the record must include the date and time of the 2-hour period and an estimate of the cumulative number of minutes in the 2-hour period for which emissions were visible.

[40 C.F.R. 63.655(i)(9)(ii)(C), Subpart CC]

d. The 15-minute Block Average cumulative flows for Vent Gas and, if applicable, Perimeter Assist Air, and Premix Assist Air specified to be monitored under Condition 28, along with the date and time interval for the 15-minute Block Average Period.

[40 C.F.R. 63.655(i)(9)(iii), Subpart CC]

e. The Vent Gas compositions specified to be monitored under Condition 29.

[40 C.F.R. 63.655(i)(9)(iv), Subpart CC]

f. Each 15-minute block average operating parameter calculated following the methods specified in Conditions 44 through 45.4, as applicable.

[40 C.F.R. 63.655(i)(9)(v), Subpart CC]

g. All periods during which operating values are outside of the applicable operating limits specified in Conditions 44.1, 44.2, and 45.

[40 C.F.R. 63.655(i)(9)(vii), Subpart CC]

h. All periods during which the Permittee did not perform flare monitoring according to the procedures in Conditions 28 through 30, 32.1, 42, and 43.

[40 C.F.R. 63.655(i)(9)(viii), Subpart CC]

i. Records when the flow of Vent Gas exceeds the smokeless capacity of the flare, including start and stop time and dates of the flaring event.

[40 C.F.R. 63.655(i)(9)(x), Subpart CC]

j. Records sufficient to document compliance with the requirements of Condition 49.4a any time the Permittee uses a Portable Flare.

50.5. *Document Retention.* Except where other time periods are specifically noted, the Permittee shall retain all records created pursuant to Conditions 50.1 through 50.4 for a period of no less than five (5) years or until Termination of Consent Decree

Civil No. Civ. SA-16-cv-00722 filed July 18, 2016, whichever is longer, including the raw data values, and shall make any such documents available upon request.

[40 C.F.R. 63.655(i)(9) and 63.670(p), Subpart CC]

Prohibitions – Emission Credit Generation

51. The Permittee shall neither generate nor use Emissions Reductions associated with any emission reductions resulting from flaring as provided in Conditions 27 through 50 as netting reductions; as emissions offsets; to apply for, obtain, trade, or sell any emission reduction credits; or in determining whether a project would result in a significant net emissions increase in any PSD, major non-attainment, and/or minor NSR permit or permit proceeding.

51.1. Baseline actual emissions during any 24-month period selected by the Permittee shall be adjusted downward to exclude any portion of the baseline emissions that would have been eliminated as a result of the flare requirements in Conditions 27 through 50 had the Permittee been complying with the limits during that 24-month period.

51.2. Any plant-wide applicability limits ("PALs") as, that term is defined in 40 C.F.R. 52.21(b), that apply to emissions reductions specific in this Condition shall be adjusted downward to exclude any portion of the baseline emissions used in establishing such limit(s).

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 31, June 29, 2022]

52. If the Waste Gas minimization results in emissions lower than the allowable level under the flaring limitations in Conditions 37 and 38 such reductions are prohibited as emissions reductions and shall be subject to the general prohibition set forth in Condition 51 above.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 32, June 29, 2022]

53. Nothing in Conditions 51 through 52 is intended to prohibit the Permittee from seeking to:

53.1. use or generate Emissions Reductions associated with EU ID 42 *[H-801 flare]* to the extent that the proposed emission reductions represent the difference between emission reductions achieved as provided in Conditions 27 through 50 and more stringent limits that the Permittee may elect to accept for those emissions units in a permitting process, except as provided in Conditions 52 and 53;

53.2. use or generate emission reductions from emissions units that are not specified in Conditions 27 through 50 subject to an emission limitation or control requirement; and

53.3. use Emissions Reductions associated with Conditions 27 through 50 for compliance with any rules or regulations designed to address regional haze or the non-attainment status of any area (excluding PSD and non-attainment NSR rules, but including, for example, RACT rules) that apply to the facility; provided, however,

that the Permittee shall not be allowed to trade or sell any Emission Reductions associated with Conditions 27 through 50.

[18 AAC 50.040(j) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) and (c)(6)]
[Minor Permit No. AQ0035MSS07, Condition 33, June 29, 2022]

Section 6. Federal Requirements

New Source Performance Standards (NSPS), 40 C.F.R. Part 60

NSPS Subpart A – 40 C.F.R. 60 General Provisions

54. NSPS Subpart A Notification. Unless as exempted by a specific subpart, for any affected facility[32] or existing facility[33] regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Administrator[34] written notification or, if acceptable to both the Administrator and the Permittee, electronic notification, as follows:

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

54.1. A notification of the date construction (or reconstruction as defined under 40 C.F.R. 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form;

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

54.2. A notification of 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]

54.3. A notification of 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); this notice shall be 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]

54.4. A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with 40 C.F.R. 60.13(c). Notification shall be postmarked not less than 30 days prior to such date;

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

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[32] *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.

[33] *Existing facility* means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this part, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type, as defined in 40 C.F.R. 60.2.

[34] The Department defines the "the Administrator" to mean "the EPA and the Department" for conditions implementing the federal emission standards.

54.5. A notification of the anticipated date for conducting the opacity observations required by 40 C.F.R. 60.11(e)(1). The nofitications shall also include, if appropriate, a request for the EPA to provide a visible emissions reader during a performance test; the notification shall be postmarked not less than 30 days prior to such date;

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

54.6. A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by 40 C.F.R. 60.8 in lieu of Method 9 observation data as allowed by 40 C.F.R. 60.11(e)(5); this notification shall be 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]

54.7. 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), Subpart A]

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.

55. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements. The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EUs subject to emission standards under NSPS Subparts J (see Condition 65), Ja (see Condition 69), UU (see Condition 89), and KKKK (see Condition 104); #any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

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

56. NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report. The Permittee shall submit to the Department and to EPA excess emissions and monitoring

systems performance (EEMSP)[35] report (excess emissions are defined in NSPS Subparts J, Ja, and KKKK, and limits and standards are in Conditions 66, 70, 74, 106, and 108) and-or summary report form (see Condition 57). The Permittee shall submit the report(s) to the EPA and Department semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the EPA, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. 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]

56.1. The magnitude of excess emissions computed in accordance with Condition 63.5, 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]

56.2. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected EUs, the nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted.

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

56.3. 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]

56.4. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

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

57. 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 the affected EUs under NSPS Subparts J (see Condition 65), Ja (see Condition 69), and KKKK (see Condition 104) . 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 or the EPA, as follows:

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

57.1. 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

[35] The federal EEMSP report is not the same as the state excess emission report required by Condition 204.

reporting period, submit a summary report form **unless** the EEMSP report described in Condition 56 is requested, or

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

57.2. 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 report** described in Condition 56.

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

58. NSPS Subpart A Recordkeeping. The Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 C.F.R. Part 60 recorded in a permanent form suitable for inspection. Except as provided in 40 C.F.R. 60.7(f)(1) and (2), the file shall be retained for at least five years, in accordance with Condition 200, following the date of such measurements, maintenance, reports, and records

[18 AAC 50.040(a)(1) & (j)(4)]
[40 C.F.R. 60.7(f), Subpart A]
[40 C.F.R 71.6(a)(3)(ii)(B)]

59. NSPS Subpart A Performance (Source) Tests. The Permittee shall conduct source tests according to Section 8 and as required in this condition on any affected facility.

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

59.1. Except as specified in 40 C.F.R. 60.8(a)(1),(a)(2), (a)(3), and (a)(4), within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, or at such other times specified by 40 C.F.R. Part 60, and at such other times as may be required by the Administrator, the Permittee shall conduct performance test(s) and furnish EPA and the Department a written report of the results of such performance test(s).

[40 C.F.R. 60.8(a), Subpart A]

59.2. Conduct source tests and reduce data as set out in 40 C.F.R. 60.8(b), and provide the Department copies of any EPA waivers or approvals of alternative methods.

[40 C.F.R. 60.8(b), Subpart A]

59.3. Conduct source tests under conditions specified by EPA to be based on representative performance of the affected EU. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be

considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

[40 C.F.R. 60.8(c), Subpart A]

59.4. Provide the EPA and the Department at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the EPA and the Department the opportunity to have an observer present. If after 30 days' notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the Permittee shall notify the EPA and the Department as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the EPA and the Department by mutual agreement.

[40 C.F.R. 60.8(d), Subpart A]

59.5. Provide performance testing facilities as follows:

a. Sampling ports adequate for test methods applicable to the affected EU. This includes

(i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

(ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

b. Safe sampling platform(s);

c. Safe access to sampling platform(s); and

d. Utilities for sampling and testing equipment.

[40 C.F.R. 60.8(e), Subpart A]

59.6. Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method.

a. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply.

b. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the EPA's approval, be determined using the arithmetic mean of the results of the two other runs.

c. Unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Administrator in writing, the report for a performance test shall include the elements identified in 40 C.F.R. 60.8(f)(2)(i) through (vi).

[40 C.F.R. 60.8(f), Subpart A]

60. NSPS Subpart A Good Air Pollution Control Practice (GAPCP). At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate any affected EU under NSPS Subparts K, Ka, and Kb (see Conditions 80, 81, and 83), Subparts Dc (see Condition 64), J (see Condition 65), Ja (see Condition 69), UU (see Condition 89), GGGa/VVa (see Condition 112), and QQQ (see Condition 90), 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 emissions units.

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

61. 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 66, 70, 74, 80, 81, 83, 89, 91, 100, 106, 108, and 113 through 123, 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 the affected EU(s) 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]

62. 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 under NSPS Subparts J, Ja, UU, IIII, JJJJ, and KKKK, as set forth in Conditions 66, 70, 71, 74, 89, 100, 106, and 108. 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.

[18 AAC 50.040(a)(1)]
[40 C.F.R. 60.12, Subpart A]

63. NSPS Subpart A, Monitoring. For a Continuous Monitoring System (CMS) required under NSPS Subparts J (Condition 67), Ja (Conditions 72 and 75), QQQ (Condition 94.1.a), the Permittee shall compy with the following:

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

63.1. Install and operate the CMS prior to a performance test conducted under Condition 59, 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]

63.2. Conduct continuous emission monitoring system (CEMS) performance evaluations during any performance test required under Condition 59 or within 30 days thereafter in accordance with the applicable performance specification in Appendix B of this part and at such other times as may be required by the Administrator under Section 114 of the Act.#Furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

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

63.3. 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]

63.4. Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under Condition 63.3, keep all CMS's 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]

63.5. Reduce data in accordance with the following:

a. For CMS other than opacity, reduce all data to one-hour averages for time periods as defined in 40 C.F.R. 60.2. Compute one-hour averages in accordance with 40 C.F.R. 60.13(h)(2)(i) through (ix), 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.

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

b. Convert all excess emission into units of the standard used in Conditions 66, 70, 71, 74, and 106. After conversion, the Permittee may round data to the same number of significant digits as used in the standards.

[40 C.F.R. 60.13(h)(3), Subpart A]

c. The Permittee may request for an alternative monitoring procedures or requirements of 40 C.F.R. 60 through a written application, subject to the Administrator’s approval, in accordance with 40 C.F.R. 60.13(i)(1) through (9).

[40 C.F.R. 60.13(i)(1) – (2), Subpart A]

d. The Permittee may request for an alternative to the relative accuracy (RA) test specified in Performance Specification 2 of appendix B in accordance with 40 C.F.R. 60.13(j)(1) through (2).

[40 C.F.R. 60.13(j)(1) – (2), Subpart A]

NSPS Subpart Dc – Steam Generating Units

64. NSPS Subpart Dc Fuel Consumption. For EU ID 29 *[H-1701]* listed in Table A, the Permittee shall keep records and report, as follows:

64.1. Record the amounts of each fuel combusted during each day and maintain the records in accordance with Condition 200.

a. As an alternative to meeting the requirements of Condition 64.1, for affected emission units that combust only natural gas, the Permittee may elect to record the amount of the fuel combusted during each calendar month and maintain the records in accordance with Condition 200.

[18 AAC 50.040(a)(2)(D)]
[40 C.F.R. 60.48c(g) & (i), Subpart Dc]

NSPS Subpart J – Petroleum Refineries

65. NSPS Subpart J Applicability. For fuel gas combustion devices[36] (FGCD) EU IDs 2 – 11, 17 – 20, 29, 115, and 116 [H-101A, 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-1701, H-1601, H-1602] and Claus sulfur recovery plant[37], EU IDs 25 and 101 [H-1105 and SRU], listed in Table A, the Permittee shall comply with the applicable NSPS Subpart J requirements for FGCD which commenced construction, modification or reconstruction after June 11, 1973 and on or before May 14, 2007, and for Claus sulfur recovery plant with a design capacity for sulfur feed of more than 20 long tons per day (LTPD) which commenced construction, reconstruction or modification after October 4, 1976, and on or before May 14, 2007.

65.1. The Permittee shall comply with the following emissions standards applicable to FGCD and Claus sulfur recovery plant (Condition 66) and corresponding MR&R requirements (Conditions 67 through 68).

[18 AAC 50.040(a)(2)(J) and 50.326(j)]
[40 C.F.R. 60.100(a) & (b), Subpart J]

66. NSPS Subpart J SO_2 Emission Standards. The Permittee shall comply with the following emissions limitations:

[18 AAC 50.040(a)(2)(J) and 50.326(j)]
[40 C.F.R. 71.6(a)(1)
[Minor Permit No. AQ0035MSS07, Condition 6, June 29, 2022]

[36] *Fuel gas combustion device* means any equipment, such as process heaters, boilers and flares used to combust fuel gas, except facilities in which gases are combusted to produce sulfur or sulfuric acid. [Ref. 40 C.F.R. 60.101(g)].

[37] EU ID 101 was modified before May 14, 2007, therefore, is subject to NSPS Subpart J and not Ja. *Claus sulfur recovery plant* means a process unit which recovers sulfur from hydrogen sulfide by a vapor-phase catalytic reaction of sulfur dioxide and hydrogen sulfide. [Ref. 40 C.F.R. 60.101(i)]

66.1. For the FGCD, EU IDs 2 – 11, 17 – 20, 29, 115, and 116 listed in Table A, do not burn any fuel gas[38] that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf or 162 ppmv) determined on a rolling 3-hour average basis as measured by the H_2S continuous monitoring system required under Condition 67.1; and

[40 C.F.R. 60.104(a)(1) and 60.105(e)(3)(ii), Subpart J]

66.2. For exhaust gases from EU ID 25 located in EU ID 101 (operated with an oxidation control system or a reduction control system followed by incineration), do not discharge or cause the discharge of any gases into the atmosphere to exceed SO_2 emissions of 250 ppmv (dry basis) at zero percent excess air on a rolling 12-hour average basis as measured by the SO_2 continuous monitoring system required under Condition 67.2.

[40 C.F.R. 60.104(a)(2)(i) and 60.105(e)(4)(iii), Subpart J]

67. NSPS Subpart J SO_2 Emission Monitoring and Recordkeeping. The Permittee shall monitor and record compliance with the H_2S and SO_2 emission standards under Condition 66, as follows:

[18 AAC 50.040(a)(2)(J) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i) & (ii)]

67.1. Install, calibrate, maintain and operate instruments or a dual-range analyzer for continuous monitoring and recording of the concentration (dry basis) of H_2S in fuel gases before being burned in EU IDs 2 through 11, 17 through 20, 29, 115, and 116.

a. The span value for the fuel gas CEMS is 425 mg/dscm H_2S (300 ppmv), and up to 3,000 ppm H_2S, as required in Condition 26.2.b.

b. Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location (i.e., after one of the combustion devices), if monitoring at this location accurately represents the SO_2 emissions into the atmosphere from each of the combustion devices.

c. The performance evaluations for H_2S monitors under 40 C.F.R. 60.13(c) (Condition 63.2) shall use Performance Specification 7. EPA Methods 11, 15, 15A or 16 shall be used for conducting the relative accuracy evaluations.

d. Determine compliance with the H_2S standard in Condition 66.1 in accordance with 40 C.F.R. 60.106(e)(1) by using the test methods listed in Condition 67.1.c.

[Minor Permit No. AQ0035MSS07, Condition 6, June 29, 2022]
[40 C.F.R. 60.105(a)(4)(i)-(iii) and 60.106(e)(1), Subpart J]

67.2. Install, calibrate, maintain and operate instruments for continuous monitoring and recording of the concentration (dry basis) of SO_2 emissions into the atmosphere

[38] *Fuel gas* means any gas which is generated at a petroleum refinery and which is combusted, including natural gas when the natural gas is combined and combusted in any proportion with a gas generated at a petroleum refinery. [Ref. 40 C.F.R. 60.101(d)]

from EU ID 25 *[H-1105]* located in EU ID 101 *[SRU]*. The monitor shall include an oxygen monitor for correcting the data for excess air.

a. The span values for this monitor are 500 ppm SO_2 and 25 percent O_2.

b. Use Performance Specification 2 (40 C.F.R. 60, Appendix B) for the performance evaluations for this SO_2 monitor required under 40 C.F.R. 60.13(c) (Condition 63.2).

c. Use EPA Methods 6 or 6C (40 C.F.R. 60, Appendix A-4) and Methods 3 or 3A (40 C.F.R. 60, Appendix A-2) for conducting the relative accuracy evaluations.

d. Determine compliance with the SO_2 standard in Condition 66.2 in accordance with 40 C.F.R. 60.106(f)(1) by the test methods listed in Condition 67.2.b.

[40 C.F.R. 60.105(a)(5) and 60.106(f)(1), Subpart J]

68. NSPS Subpart J SO_2 Emission Reporting. The Permittee shall report as follows:

[18 AAC 50.040(a)(2)(J) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)]

68.1. For the purpose of EEMSP Reports and Summary Reports required under Conditions 56 and 57, the Permittee shall:

a. For EU IDs specified in Condition 66.1, report all periods during which the rolling 3-hour average concentration of H_2S as measured by the H_2S continuous monitoring systems under Condition 67.1 exceeds the limit in Condition 66.1; and

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

b. For EU ID 25 *[H-1105]* located in EU ID 101 *[SRU]*, report all periods during which the 12-hour average concentration of SO_2 as measured by the SO_2 continuous monitoring system (and corrected to zero percent excess air) under Condition 67.2 exceeds the limit in Condition 66.2.

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

c. 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]

d. Submit the reports required under Condition 68 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]

e. Submit a signed statement certifying the accuracy and completeness of the information contained in the report required in Condition 68.

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

NSPS Subpart Ja – Petroleum Refineries

69. NSPS Subpart Ja Applicability. For EU IDs 42, 27, 28, 119 *[J-801 flare, H-1201/1203, H-1202, and H-1801]* listed in Table A, the Permittee shall comply with the applicable NSPS Subpart Ja requirements for flares (EU ID 42) which commenced construction, modification or reconstruction after June 24, 2008 and for fuel gas combustion devices[39] (FGCD, EU IDs 119, 27, and 28), which commenced construction, modification or reconstruction after May 14, 2007.

69.1. The Permittee shall comply with the following emissions and work practice standards applicable to FGCD and flares (Conditions 70, 71, 74, 78, and 79) and corresponding MR&R requirements (Conditions 72, 73, and 75 through 77).

[18 AAC 50.040(a)(2)(TT) and 50.326(j)]
[40 C.F.R. 60.100a(a), (b), & (c)(1) Subpart Ja]

FGCD (EU IDs 27, 28, and 119)

70. NSPS Subpart Ja FGCD Fuel Gas (FG)[40] H_2S Concentration Limit. The Permittee shall not allow fuel gas burned in EU IDs 27, 28, and 119 *[H-1201/1203, H-1202, H-1801]* to contain hydrogen sulfide (H_2S) in excess of:

70.1. 162 ppmv determined on a 3-hour rolling average basis; **and**

70.2. 60 ppmv determined on a 365 successive calendar day rolling average basis.

[18 AAC 50.040(a)(2)(TT), 50.040(j)(4), and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.102a(g)(1)(ii), Subpart Ja]

70.3. For Temporary FGCD:

a. The Permittee is not subject to the 365 successive calendar day rolling standard of Condition 70.2 if the emission unit is not a fuel gas combustion device (i.e., combusting only natural gas) for the requisite 365-successive-calendar day averaging period.

b. In the event that fuel gas combustion exceeds 365 days, or fuel gas combustion ceases 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

[39] *Fuel gas combustion device* (FGCD) means any equipment, such as process heaters and boilers, used to combust fuel gas. For the purposes of this Subpart Ja, *fuel gas combustion device* does not include flares or facilities in which gases are combusted to produce sulfur or sulfuric acid. [Ref. 40 C.F.R. 60.101a]

[40] As defined in NSPS Subpart Ja, *fuel gas* (FG) means any gas which is generated at a petroleum refinery and which is combusted. *Fuel gas* includes natural gas when the natural gas is combined and combusted in any proportion with a gas generated at a refinery. [Ref. 40 C.F.R. 60.101a]

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 70.1 or 70.2 during periods in which only natural gas is combusted as the fuel source.

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

71. NSPS Subpart Ja FGCD NO_x Emissions Limit. The Permittee shall not discharge to the atmosphere from EU ID119 *[H-1801]* any emissions of NO_x in excess of:

[18 AAC 50.040(a)(2)(TT), 50.040(j)(4), and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

71.1. For each natural draft process heater, EU ID119:

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.

[40 C.F.R. 60.102a (g)(2)(i)(A) & (B), Subpart Ja]

71.2. For Temporary FGCD:

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 NO_x (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 NO_x (or O_2 where applicable) standard during periods in which only natural gas is combusted as the fuel source.

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

72. NSPS Subpart Ja FGCD Monitoring. The Permittee shall monitor compliance with the NSPS Subpart Ja emissions standards under Conditions 70 and 71, as follows:

[18 AAC 50.040(a)(2)(TT), 50.040(j)(4), and 50.326(j)]
[40 C.F.R. 71.6(3)(i)]

72.1. For H_2S standards in Condition 70, install, calibrate, maintain and operate each H_2S monitor according to Performance Specification 7 of Appendix B to Part 60 for continuous monitoring and recording of the concentration (dry basis) of H_2S in fuel gases before being burned in EU IDs 27, 28, and 119.

a. The span values for the fuel gas H_2S monitor is 300 ppmv H_2S, and up to 3,000 ppm H_2S as required in Condition 26.2.b.

b. Conduct the performance evaluations for H_2S monitors according to Condition 63.2 and Performance Specification 7 of Appendix B to Part 60. Use Methods 11, 15A, or 16 for conducting the relative accuracy evaluations.

c. Comply with the applicable quality assurance procedures in Appendix F to Part 60 for each H_2S monitor.

d. FGCD 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 FGCD or flares.

[Minor Permit No. AQ0035MSS07, Condition 6, June 29, 2022]
[40 C.F.R. 60.107a(a)(2)(i)-(2)(iv), Subpart Ja]

72.2. For NO_x standards in Condition 71, monitor compliance as follows:

a. If the Permittee is electing to use an O_2 monitor along with biennial testing as the compliance demonstration for the NO_x concentration standard in Condition 71 as described in 40 C.F.R. 60.107a(c)(6). The Permittee shall do the following:

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

(ii) 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.

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

(A) 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.

(B) The owner or operator shall conduct performance evaluations of each O_2 monitor according to the requirements in 40 C.F.R. 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.

(C) 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 72.2.a(i) and 72.2.a(ii) 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 NO_x limitations of NSPS Ja upon recommencement of fuel gas combustion.

(iv) Consistent with 40 C.F.R. 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 O2 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 O2 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.

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

[40 C.F.R. 60 Appendices & 40 C.F.R. 60. 107a(c)(l) - (c)(6), Subpart Ja]

72.3. **NSPS Subpart Ja FGCD Testing.** The Permittee shall comply with all applicable FGCD testing requirements as follows:

a. 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 70 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 C.F.R. 60. 104a(a), Subpart Ja]

b. 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 C.F.R. part 60, Appendices A-I through A-8 or other methods as specified in this section, except as provided in § 60.8(b).

[40 C.F.R. 60. 104a(c), Subpart Ja]

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

[40 C.F.R. 60.104a(i)(l)-(i)(4)(ii)]
[40 C.F.R. 60.104a(i)(6)-(i)(8), Subpart Ja]

d. The owner or operator shall determine compliance with the H_2S emissions limit in Condition 70 for a fuel gas combustion device according to the test methods and procedures in 40 C.F.R. 60.104a(j).

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

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

[18 AAC 50.040(a)(2)(TT), 50.040(j)(4), and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii) & (iii)]

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

73.2. 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).

73.3. The owner or operator shall maintain the following records in accordance with 40 C.F.R. 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:

(i) A description of the discharge.

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

(iii) 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.

(iv) 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 70.1. Process knowledge can be used to make these estimates for FGCD.

(v) 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 FGCD, assume 99-percent conversion of H_2S 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 in Condition 79.3, 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 79.3.c.

(viii) For any corrective action analysis for which corrective actions are required in Condition 79.3.c, a description of the corrective action(s) completed within the first 45 days fo llowing the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

b. 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.

(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.

(v) The information described in Condition 73.3.a for all discharges listed in Condition 73.3.a.

(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.

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

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

Flare (EU ID 42 [J-801 flare]

74. NSPS Subpart Ja Flare FG H_2S Concentration Limit. Except as provided in Condition 74.1, the Permittee shall not cause or allow fuel gas burned in 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.

74.1. 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.

[18 AAC 50.040(a)(2)(TT), 50.040(j)(4), and 50.326(j)]
[40 C.F.R. 71.6((a)(1)]
[40 C.F.R. 60.103a(h), Subpart Ja]

75. NSPS Subpart Ja Flare FG H_2S Monitoring. The Permittee shall monitor compliance with the H_2S fuel gas concentration limit in Condition 74 as follows:

[18 AAC 50.040(a)(2)(TT), 50.040(j)(4), and 50.326(j)]
[40 C.F.R. 71.6((a)(3)(i)]]

75.1. 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.

a. The span value for this CEMS is 300 ppmv H_2S.

b. 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]

c. 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]

75.2. Determine the total reduced sulfur concentration for each gas line directed to EU ID 42 for assessing root cause analysis threshold required by Condition 79, in accordance with either Condition 75.2.a or Condition 75.2.b:

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

a. **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]

(i) 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.

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

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

(iii) 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) (Condition 63.2), 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]

b. **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 according to the requirements in Conditions 75.2.b(i) through 75.2.b(iii) and collect and analyze samples of the gas and calculate total sulfur concentrations as specified in Condition 75.2.b(iv).

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

(i) Install, operate, and maintain each H_2S monitor according to Performance Specification 7 of Appendix B to 40 C.F.R Part 60.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. A single dual-range H_2S monitor may be used to comply with the requirements of Conditions 78 and 78.4.b of this section provided the applicable span requirements are met.

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

(ii) 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.

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

(iii) Comply with the applicable quality assurance procedures in appendix F to part 60 for each H_2S monitor.

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

(iv) *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 79, the Permittee shall collect representative daily samples of the gases discharged to the flare; thereafter collect representative weekly samples, or as required in Condition 75.2.b(iv)(E).

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

(A) Analyze the daily samples for total sulfur using either EPA Method 15A of 40 C.F.R. 60 Appendix A-5, EPA Method 16A of 40 C.F.R. 60 Appendix A-6, ASTM Method D4468-85 (Reapproved 2006) (incorporated by reference in 40 C.F.R. 60.17) or ASTM Method D5504-08 (incorporated by reference in 40 C.F.R. 60.17).

(B) 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).

(C) 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.

(D) For all days other than those during which data are being collected to develop a 10-day average, 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.

(E) 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 based on data for the outlying weekly sample plus data collected over the following 9 operating days.

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

c. Different options may be used for different gas lines in the flare system. If a monitoring system is in place for a modified flare that is capable of complying with the requirements related to either Condition 75.2.a or 75.2.b, the Permittee must comply with the applicable monitoring requirements upon startup of the modified flare. If a monitoring system is not in place for a modified flare that is capable of complying with the requirements related to either Condition 75.2.a, or 75.2.b, the Permittee must comply with the applicable requirements no later than November 11, 2015 or upon startup of the modified flare, whichever is later.

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

75.3. **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).

a. Comply with Condition 28 to demonstrate compliance with Condition 75.3.

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

76. NSPS Subpart Ja Flare 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:

[18 AAC 50.040(a)(2)(TT), 50.040(j)(4), and 50.326(j)]
[40 C.F.R. 71.6((a)(3)(ii)]

76.1. A copy of the flare management plan required in Condition 78;

76.2. 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]

a. A description of the discharge.

b. The date and time the discharge was first identified and the duration of the discharge.

c. 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.

d. 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.

e. 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.

f. The steps that the owner or operator took to limit the emissions during the discharge.

g. The root cause analysis and corrective action analysis conducted as required by Condition 79, 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.

h. 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.

i. 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.

76.3. If Permittee elects to monitor total sulfur using the procedures described in Condition 75.2.b: 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]

77. NSPS Subpart Ja Flare Reporting. The Permittee shall report as follows:

[18 AAC 50.040(a)(2)(TT), 50.040(j)(4), and 50.326(j)]
[40 C.F.R. 71.6((a)(3)(iii)]

77.1. Submit the management plan as required in Condition 78.4

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

77.2. For the purpose of EEMSP Reports and Summary Reports required under Conditions 56 and 57, the Permittee shall report as follows:

a. 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 78 exceeds the limit in Condition 74.

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

b. 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]

c. Submit the reports required under Condition 77 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.

d. Submit a signed statement certifying the accuracy and completeness of the information contained in the report required in Condition 77.

77.3. Submit excess emissions reports according to the requirements of 40 C.F.R. 60.7(c) (Condition 56), except that the reports shall include:

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; and

e. The information required by Condition 76.2

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 official, certifying the accuracy and completeness of the information contained in the report.

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

NSPS Subpart Ja Work Practice or Operational Standards

78. Flare Management Plan.[41] The Permitteee shall develop and implement a written flare management plan to include the following information:

[18 AAC 50.040(a)(2)(TT), 50.040(j)(4), and 50.326(j)]
[40 C.F.R. 71.6((a)(1)]
[40 C.F.R. 60.103a(a) & (b), Subpart Ja]

78.1. 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]

78.2. 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.

[41] On November 11, 2015, the Permittee submitted to EPA the Flare Management Plan, as required under 40 C.F.R. 60.103a(a) & (b), Subpart Ja. An updated Flare Management Plan was submitted on July 26, 2017 which included updates related to the installation of the flare gas recovery system, a revised existing baseline, and the addition of an alternative baseline flow rate.

b. The discharge minimization assessment shall consider:

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

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

(iii) 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.

(iv) 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]

78.3. 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 78.4.b; 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:

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

(ii) 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;

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

[40 C.F.R. 60.103a(a)(3) & (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]

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

[40 C.F.R. 60.103a(b)(1) - (3), Subpart Ja]

a. 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 upon startup of the modified flare.

b. Submit the plan to the Administrator and to EPA Office of Air Quality Planning and Standards, Sector Polices and Programs Division, as specified in 40 C.F.R. 60.103a(b)(3). Electronic copies in lieu of hard copies may also be submitted to refinerynsps@epa.gov.

c. Comply with the plan as submitted by the date specified in Condition 78.4.a.

d. Update the plan periodically to account for changes in the operation of the flare, such as new connections to the flare or the installation of a flare gas recovery system.

(i) 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. The Permittee must comply with the updated plan as submitted.

79. Root-Cause Analysis and Corrective Action Analysis. The Permittee shall conduct a root-cause analysis and corrective action analysis for each of the conditions specified in Conditions 79.1 and 79.2.

79.1. For the flare, EU ID 42, conduct a root-cause analysis and corrective action analysis

a. anytime emissions of SO_2 exceed 227 kg (500 lb) in any 24-hour period; or

b. if any discharge to the flare exceeds 14,160 standard cubic meters (m^3) (500,000 scf) above the baseline, determined in Condition 78.3.f, in any 24-hour period.

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

79.2. For the FGCD, EU IDs 119, 27, and 28, conduct a root-cause analysis and corrective action analysis for each exceedance of an applicable short-term emissions limit in Condition 70

a. 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. The Permittee shall comply with the following:

[40 C.F.R.60.l03a(c)(2), Subpart Ja]

79.3. Complete the root cause analysis and corrective action analysis as soon as possible, but no later than 45 days after a discharge meeting the conditions specified in Condition 79.

a. For any of EU IDs 42, 27, 28, and 119, if a single continuous discharge meets any of the conditions specified under Condition 79 for two or more consecutive 24-hour periods, a single root cause analysis and corrective action analysis may be conducted.

[40 C.F.R..103a(d)(1), Subpart Ja]

b. For EU IDs 42, 27, 28, and 119, if discharges occur that meet the conditions specified under Condition 79 for more than one affected emissions unit in the same 24-hour period, initial root cause analyses shall be conducted for each affected emissions unit. 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 C.F.R..103a(d)(5), Subpart Ja]

c. For EU ID 42, if a single discharge triggers a root-cause analysis based on more than one of the conditions specified in Condition 79.1, a single root-cause analysis and corrective action analysis may be conducted.

[40 C.F.R..103a(d)(2), Subpart Ja]

d. For EU ID 42, if the discharge 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 78.3.g 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 76.2 and 77.2.b.

[40 C.F.R..103a(d)(3), Subpart Ja]

79.4. The Permittee shall implement the corrective action(s) identified in the corrective action analysis conducted pursuant to Condition 79.3 in accordance with the applicable requirements of Conditions 79.4.a through 79.4.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 the Permittee concludes that corrective action should not be conducted, the Permittee shall record and explain the basis for that conclusion no later than 45 days following the discharge as specified in Condition 76.2.g.

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 Permittee 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 Permittee 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 required in Condition 76.2.h.

[40 C.F.R. 60.103a(e)(1) – (3), Subpart Ja]

NSPS Subpart K/NESHAP Subpart CC – Petroleum Liquids Storage Vessels for (After June 11, 1973, and Prior to May 19, 1978

80. NSPS Subpart K Standards. For EU IDs 58 *[TK-12]* Group 2 storage vessel and EUIDs 87 through 89 *[TK-64, TK-65, and TK-66]*[42] Group 1 storage vessels listed in Table A, storage vessels equipped with floating roofs, the Permittee shall comply with the applicable provisions of Group 1 and Group 2 storage vessel provisions of 40 C.F.R. 63 NESHAP Subpart CC in Conditions 130 and 131 to ensure compliance with 40 C.F.R. 60 Subpart K.

[42] Overlap with NESHAP Subpart CC (see Condition 126): EU IDs 87 – 89 *[TK-64, TK-65, and TK-66]* are Group 1 storage vessels while EU ID 58 *[TK-12]* is a Group 2 storage vessel, as defined by NESHAP Subpart CC 40 C.F.R. 63.641. In accordance with 40 C.F.R. 63.640(n)(5), these tanks are required to only comply with the requirements of NESHAP Subpart CC.

[18 AAC 50.040(a)(2)(K), (c)(10), & (j)(4)]
[40 C.F.R. 71.6((a)(1) & (3)]
[40 C.F.R. 60, Subpart K; 40 C.F.R. 63.640(n)(5), Subpart CC]

NSPS Subpart Ka/NESHAP Subpart CC – Petroleum Liquids Storage Vessels (After May 18, 1978, and Prior to July 23, 1984)

81. NSPS Subpart Ka Standards and MR&R Requirements. For EU IDs 59, 60, and 107 *[TK-13, TK-14, and TK-04c]*[43] listed in Table A, storage vessels equipped with fixed roofs 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).

81.1. 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 which collects all VOC vapors and gases discharged from the storage vessel, and a vapor return or disposal system which is designed to process such VOC vapors and gases so as to reduce their emission to the atmosphere by at least 95 percent by weight.

81.2. If the maximum true vapor pressure of the petroleum liquid stored in EU IDs 59, 60, or 107 exceeds 6.9 kPa (1.0 psia) or if the storage vessel is not equipped with a vapor recovery and return or disposal system as required in Condition 81.1, monitor, record, and report, as follows:

[18 AAC 50.040(a)(2)(L) & (j)(4)]
[40 C.F.R. 71.6((a)(1) & (3)]
[40 C.F.R. 60.112a(a)(2) & (b) and 60.115a(d), Subpart Ka]
[40 C.F.R. 63.640(n)(6), Subpart CC]

a. **Monitoring.** The Permittee shall determine the maximum true vapor pressure of the petroleum liquid stored as follows:

(i) 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).

(ii) 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 in Condition 81.2.a(i) is to be determined from available data.

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

[43] NSPS Subpart Ka affected EU IDs 59, 60, and 107 *[TK-13, TK-14, and TK-04c]* are Group 2 storage vessels as defined by NESHAP Subpart CC 40 C.F.R. 63.641. In accordance with 40 C.F.R. 63.640(n)(6), these tanks are required to comply only with the requirements of NSPS Subpart Ka, except as provided for in 40 C.F.R. 63.640(n)(9). However, 40 C.F.R. 63.640(n)(9) pertains only to storage vessels equipped with external floating roof. EU IDs 59, 60, and 107 are equipped with internal floating roof, therefore, there is no overlap with the provisions of NESHAP Subpart CC for the NSPS Subpart Ka affected EUs.

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

(i) petroleum liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period; and

(ii) the true vapor pressure in Condition 81.2.a 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]

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

(i) Include with the operating report under Condition 205 the records required under Condition 81.2.b for the period covered by the report.

(ii) Report under Condition 204 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)]

NSPS Subpart Kb/NESHAP Subpart CC – Volatile Organic Liquid Storage Vessels (After July 23, 1984)

82. NSPS 40 C.F.R. 60 Subpart Kb Overlap Provisions with NESHAP 40 C.F.R. 63 Subpart CC. For EU ID 120 *[Tank 67]* listed in Table A, the Permittee shall comply with the applicable provisions 40 C.F.R. 60 Subpart Kb. In addition, comply with the requirements under 40 C.F.R. 63.640(n)(8) Subpart CC in Conditions 83.1, 84.5, and 88.3.[44]

[18 AAC 50.040(a)(2)(M), (c)(10), & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.110b(a), Subpart Kb]
[40 C.F.R. 63.640(n)(2) & (n)(8), Subpart CC]

83. NSPS Subpart Kb Requirements. For EU ID 120, a storage vessel meeting the design requirements specified in 40 C.F.R. 60.112b(a), the Permittee shall equip the storage vessel with a fixed roof in combination with an internal floating roof, as described in 40 C.F.R. 60.112b(a)(1).

[18 AAC 50.040(a)(2)(M), (c)(10), & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.112b(a)(1), Subpart Kb]
[40 C.F.R. 63.640(n)(2), Subpart CC]

83.1. To be in compliance with 40 C.F.R. 60.112b(a)(1)(iv), guidepoles in floating roof storage vessels must be equipped with covers and/or controls (e.g., pole float system, pole sleeve system, internal sleeve system or flexible enclosure system) as appropriate to comply with the "no visible gap" requirement.

[44] Overlap with NESHAP Subpart CC (see Condition 128.1.c): EU ID 120 *[Tank 67]* is a Group 1 storage vessel as defined by NESHAP Subpart CC 40 C.F.R. 63.641. In accordance with 40 C.F.R. 63.640(n)(2), the storage vessel is only required to comply with either the requirements of Subpart Kb (except as provided in 40 C.F.R. 63.640 (n)(8)) or 40 C.F.R. 63 Subpart CC. Conditions 83 – 88 contain additional references to the overlap provisions under 40 C.F.R 63.640(n)(8).

[40 C.F.R. 63.640(n)(8)(vii), Subpart CC]

83.2. Alternatively, 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 Subpart Kb.

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

84. NSPS Subpart Kb Testing and Procedures. After installing the control equipment required to meet the requirements of Condition 83 (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:

[18 AAC 50.040(a)(2)(M), (c)(10), & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i)]

84.1. 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. If 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.

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

84.2. 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.

a. 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.

[40 C.F.R. 60.113b(a)(2), Subpart Kb]

84.3. 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 84.4 at least every 5 years; or

b. Visually inspect the vessel as specified in Condition 84.2.

[40 C.F.R. 60.113b(a)(3), Subpart Kb]

84.4. 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 84.4 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 84.2 and 84.3.b and at intervals no greater than 5 years in the case of vessels specified in Condition 84.3.a.

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

84.5. If a failure is detected during the internal floating roof (IFR) visual inspections required in Condition 84.2, and the vessel cannot be repaired within 45 days and the vessel cannot be emptied within 45 days, the owner or operator may utilize up to two extensions of up to 30 additional calendar days each. The owner or operator is not required to provide a request for the extension to the Administrator.

[40 C.F.R. 63.640(n)(8)(iii), Subpart CC]

85. 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 84.1 and 84.4 to afford the Administrator the opportunity to have an observer present. If the inspection required by Condition 84.4 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.

[18 AAC 50.040(a)(2)(M) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)]
[40 C.F.R. 60.113b(a)(5), Subpart Kb]

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

[18 AAC 50.040(a)(2)(M) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i)]

86.1. 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]

87. NSPS Subpart Kb Recordkeeping. The Permittee shall comply with the following:

[18 AAC 50.040(a)(2)(M) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii)]

87.1. 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]

87.2. 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 83, the Permittee shall keep a record of each inspection performed as required by Conditions 84.1 through 84.4. 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]

88. NSPS Subpart Kb Reporting. For EU ID 120 *[Tank 67]* equipped with fixed roof and internal floating roof as described in Condition 83, the Permittee shall submit with the operating report required under Condition 205 the following:

[18 AAC 50.040(a)(2)(M), (c)(10), & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)]

88.1. documentation of any annual visual inspections that identify any of the conditions described in Condition 84.2; the documentation 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;

88.2. documentation of any inspection required by Condition 84.3 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 84.3.b; the report shall identify the storage vessel and the reason it did not meet the specifications of Condition 83.1 or Condition 84.3 and list each repair made; and

88.3. if an extension is utilized in accordance with Condition 84.5, in the next periodic report, include documentation of the extension by providing the identity of the

vessel and the information listed in Condition 84.2, and describe the nature and date of the repair made or provide the date the storage vessel was emptied.

[40 C.F.R. 60.115b(a)(3) & (a)(4), Subpart Kb]
[40 C.F.R. 63.640(n)(8)(iv) & (v), Subpart CC]

NSPS Subpart UU – Asphalt Storage Tanks

89. 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 69, 77, and 79 *[TK-33, TK-42, TK-51]*, listed in Table A, 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) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.472(c), Subpart UU]

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

a. In case of replacement or modification[45] of the installed opacity control device used to comply with the emission limit in Condition 89, 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(c) Subpart A (Condition 56) for the Subpart UU affected emission units.

c. The Permittee shall determine compliance with the particulate matter standards in Condition 89 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 204 if the observed opacity exceeds the limit in Condition 89.

[18 AAC 50.040(a)(2)(Y) & (j)(4) and 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)]

NSPS Subpart QQQ – Petroleum Refinery Wastewater Systems

90. NSPS Subpart QQQ Applicability. For the affected emission units of the Oily Water Sewer System, EU IDs 108, 109, 118, 123 – 125, 135, 136 and 137 *[TK-96, VU Drains, DDU Drains, TK-723, TK-724,CPI, TK-725, TK-726, and FGRS Drain System]* listed in Table A, for which construction, modification, or reconstruction is commenced after May 4, 1987, and EU IDs

[45] 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.

105 and 106 *[TK-04A and TK-04B]*,[46] the Permittee shall comply with the applicable NSPS Subpart QQQ requirements as set out in Conditions 91 through 96.

[18 AAC 50.040(a)(2)(GG) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)]
[40 C.F.R. 60.690, 60.692-1, and 60.692-3(c), Subpart QQQ]

91. NSPS Subpart QQQ Standards. The Permittee shall comply with the following standards under Conditions 91.1 through 91.4, except during periods of startup, shutdown, or malfunction:

[18 AAC 50.040(a)(2)(GG) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.692-1 & -3, 60.692-5 through -7, and 60.693-1 & -2, Subpart QQQ]

91.1. **Alternative Standards For Individual Drain Systems.**[47] As an alternative to the Standards for Individual Drain Systems under 40 C.F.R. 60.692-2, the Permittee shall operate the completely closed drain system in each of EU IDs 109, 118, and 137 in accordance with the requirements set out in 40 C.F.R. 60.693-1. The Permittee shall comply with the following:

a. Each completely closed drain system shall be equipped and operated with a closed vent system and control device complying with the requirements of Condition 91.4.b.

b. Sewer lines shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces.

(i) The portion of each unburied sewer line shall be visually inspected initially and semiannually thereafter for indication of cracks, gaps, or other problems that could result in VOC emissions.

(ii) Whenever cracks, gaps, or other problems are detected, repairs shall be made as soon as practicable, but not later than 15 calendar days after identification, except as provided in Condition 92.

[40 C.F.R. 60.693-1(a), (b) & (e), Subpart QQQ]

91.2. **Oil-Water Separators.** For EU IDs 124, 125, 135, and 136, the Permittee shall comply with the following:

[40 C.F.R. 60.692-3(a) - (f), Subpart QQQ]

[46] EU IDs 105 and 106 were installed and constructed before the NSPS Subpart QQQ applicability date (after May 4, 1987), however, they are included under this subpart because they are subject to the EPA-approved AMP issued 8/25/1997 (see Condition 94.2) as part of compliance with NSPS Subpart QQQ requirements and because they meet the applicability requirement under 40 C.F.R. 60.692-3(c). The EUs are modified or reconstructed oil-water separator tanks, each with a maximum design capacity to treat less than 38 liters per second (600 gpm) of refinery wastewater which were equipped and operated with a fixed roof prior to May 4, 1987, and electing to comply with 40 C.F.R. 60.693-2 See Condition 91.3.

[47] The Permittee has elected to comply with the Alternative Standards for Individual Drain Systems under 40 C.F.R. 60.693-1; therefore, the Permittee does not need to comply with the provisions of 40 C.F.R. 60.692-2 or 40 C.F.R. 60.694, in accordance with 40 C.F.R. 60.693-1(d).

a. Equip and operate each oil-water separator tank (EU ID 125) and slop oil tanks (EU ID 124, 136 and 137) with a **fixed roof**, which meets the following specifications.

(i) The fixed roof shall be installed to completely cover the separator tank, slop oil tank, storage vessel, or other auxiliary equipment with no separation between the roof and the wall.

(ii) The vapor space under a fixed roof shall not be purged unless the vapor is directed to a control device.

(iii) If the roof has access doors or openings, such doors or openings shall be gasketed, latched, and kept closed at all times during operation of the separator system, except during inspection and maintenance.

(iv) Roof seals, access doors, and other openings shall be checked by visual inspection initially and semiannually thereafter to ensure that no cracks or gaps occur between the roof and wall and that access doors and other openings are closed and gasketed properly.

(v) When a broken seal or gasket or other problem is identified, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after it is identified, except as provided in Condition 92.

[40 C.F.R. 60.692-3(a)(1) through (a)(5) and 60.692-3(e), Subpart QQQ]

b. Slop oil from an oil-water separator tank (EU ID 125) and oily wastewater from slop oil handling equipment (EU IDs 124, 135, and 136) shall be collected, stored, transported, recycled, reused, or disposed of in an enclosed system. Once slop oil is returned to the process unit or is disposed of, it is no longer within the scope of this subpart.

[40 C.F.R. 60.692-3(e), Subpart QQQ]

c. Each of EU IDs 124, 125, 135, and 136 may be equipped with a pressure control valve as necessary for proper system operation. The pressure control valve shall be set at the maximum pressure necessary for proper system operation, but such that the value will not vent continuously.

[40 C.F.R. 60.692-3(f), Subpart QQQ]

91.3. **Alternative Standards For Oil-Water Separators.** For EU IDs 105, 106, 108, and 123, as an alternative to Condition 91.2, the Permittee shall comply with the following:

a. For EU IDs 105 and 106, operate and maintain the **permanently affixed roof and internal floating roof** on each of the tank, meeting the specifications of 40 C.F.R. 60.112b(a)(1) Subpart Kb.

(i) The Permittee shall comply with the EPA-approved alternative montoring plan (AMP) for EU IDs 105 and 106 in Condition 94.2.

[US EPA Region X AMP, 8/25/1997]
[40 C.F.R. 60.692-3(c)(2), 60.693-2(a) & 60.695-(c), Subpart QQQ]

[40 C.F.R. 60.13(i), Subpart A and 60.112b(a)(1), Subpart Kb]

b. For EU IDs 108 and 123, operate and maintain the **floating roof** on each the tank, in accordance with the specifications and requirements set out in 40 C.F.R. 60.693-2(a), except as specified in Condition 91.3.b(ii)

[USEPA Region X AMP, 12/29/03 and 8/25/2014]
[40 C.F.R. 60.13(i), Subpart A and 60.692-3(c)(2), 60.693-2(a)(i), (ii), & (iv), Subpart QQQ]

(i) Each floating roof shall be equipped with a closure device between the wall of the separator and the roof edge. The closure device is to consist of a primary seal and a secondary seal, as specified in 40 C.F.R. 60.693-2(a)(1)(i) and (ii).

(ii) In lieu of the NSPS Subpart QQQ seal gap measuring requirements specified in 40 C.F.R. 60.693-2(a)(1)(iii) and §60.696(d), the Permittee shall comply with the EPA-approved AMP for EU IDs 108 and 123 in Condition 94.3.

(iii) Make necessary repairs within 30 calendar days of identification of seals not meeting the requirements listed in 40 C.F.R. 60.693-2(a)(1)(i) and (ii).

c. For EU IDs 105, 106, 108, and 123, the following apply:

(i) Except as provided in Condition 91.3.c(iii), each opening in the roof shall be equipped with a gasketed cover, seal, or lid, which shall be maintained in a closed position at all times, except during inspection and maintenance.

(ii) The roof shall be floating on the liquid (i.e., off the roof supports) at all times except during abnormal conditions (i.e., low flow rate).

(iii) The floating roof may be equipped with one or more emergency roof drains for removal of stormwater. Each emergency roof drain shall be fitted with a slotted membrane fabric cover that covers at least 90 percent of the drain opening area or a flexible fabric sleeve seal.

(iv) Access doors and other openings shall be visually inspected initially and semiannually thereafter to ensure that there is a tight fit around the edges and to identify other problems that could result in VOC emissions.

(A) When a broken seal or gasket on an access door or other opening is identified, it shall be repaired as soon as practicable, but not later than 30 calendar days after it is identified, except as provided in Condition 92.

[40 C.F.R. 60.693-2(a), Subpart QQQ]

91.4. **Closed Vent Systems and Control Devices.** Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

a. Vapor recovery systems (i.e., the carbon adsorbers installed on EU IDs 108, 109, 118, 123, 124, 125, 135, 136, and 137) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater.

[40 C.F.R. 60.692-5(b) and (d), Subpart QQQ]

b. For the closed drain system in each of EU IDs 109, 118, and 137, the Permittee shall comply with the following:

(i) Closed vent systems shall be designed and operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined during the initial and semiannual inspections by the methods specified in Condition 95;

(ii) Closed vent systems shall be purged to direct vapor to the control device;

(iii) A flow indicator shall be installed on a vent stream to a control device to ensure that the vapors are being routed to the device;

(iv) All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place; and

(v) When emissions from a closed system are detected, first efforts at repair to eliminate the emissions shall be made as soon as practicable, but not later than 30 calendar days from the date the emissions are detected, except as provided in Condition 92.

[40 C.F.R. 60.692-5(e)(1)-(5), Subpart QQQ]

92. Delay of Repair. The Permittee shall be allowed to delay a repair to facilities that are subject to the provisions of this subpart 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) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)]
[40 C.F.R. 60.692-6, Subpart QQQ]

93. Delay of Compliance. The Permittee shall be allowed to delay compliance of modified individual drain systems with ancillary downstream treatment components if compliance with the provisions of this subpart cannot be achieved without a refinery or process unit shutdown; in which case, installation of equipment necessary to comply with the provisions of this subpart shall occur no later than the next scheduled refinery or process unit shutdown.

[18 AAC 50.040(a)(2)(GG) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)]
[40 C.F.R. 60.692-7, Subpart QQQ]

94. NSPS Subpart QQQ Monitoring. The Permittee shall monitor operations of EU IDs 105, 106, 108, 109, 118, 123, 124, 125, 135, 136, and 137, as follows:

[18 AAC 50.040(a)(2)(GG) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i)]

94.1. **Monitoring Of Operations.** The Permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment, unless alternative monitoring procedures or requirements are approved for that facility by the Administrator.

a. Where a carbon adsorber is used for VOC emissions reduction (EU IDs 108, 109, 118, 123, 124, 125, 135, 136, and 137), a monitoring device that continuously indicates and records the VOC concentration level or reading of organics in the exhaust gases of the control device outlet gas stream or inlet and outlet gas stream shall be used.

(i) For a carbon adsorption system that does not regenerate the carbon bed directly onsite in the control device (e.g., a carbon canister), the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system shall be monitored on a regular schedule, and the existing carbon shall be replaced with fresh carbon immediately when carbon breakthrough is indicated. The device shall be monitored on a daily basis or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater. As an alternative to conducting this monitoring, an owner or operator may replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and organic concentration in the gas stream vented to the carbon adsorption system.

[40 C.F.R. 60.695(a)(3)(ii), Subpart QQQ]

94.2. **Alternative Monitoring Plan for EU IDs 105 and 106** ***[TK-04A and TK-04B]***. As allowed under the EPA-approved AMP issued August 25, 1997, the Permittee shall comply with the alternative monitoring provisions for Slop Oil Tanks, EU IDs 105 and 106, according to the procedures of NSPS Subpart Kb 40 C.F.R. 60.113b(a)(1), (2), (4), and (5), as follows:

[US EPA Region X AMP, 8/25/1997; 40 C.F.R. 60.13(i), Subpart A]
[40 C.F.R. 60.113b(a)(1), (2), (4), and (5), Subpart Kb]
[40 C.F.R. 60.692-3(c)(2), 60.693-2(a) & 60.695-(c), Subpart QQQ]

a. After installing the control equipment consistent with Condition 91.3.a, the Permittee shall

(i) 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 wastewater. If 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, repair the items before filling the vessel.

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

(ii) For 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.

(A) If the internal floating roof is not resting on the surface of the liquid 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, repair the items or empty and remove the storage vessel from service within 45 days.

(B) If a failure that is detected during inspections required in Condition 94.2.a(ii) 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 EPA in the inspection report required in Condition 94.2.b of this AMP. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the Permittee will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

[40 C.F.R. 60.113b(a)(2), Subpart Kb]

(iii) For vessels equipped with a double seal system, as specified in 40 C.F.R. §60.112b(a)(1)(ii)(B), 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.

(A) 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, repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with wastewater.

(B) In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years.

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

b. Notify the EPA and the Department in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by Conditions 94.2.a(i) and 94.2.a(iii) to afford the EPA and the Department the opportunity to have an observer present. If the inspection required by Condition 94.2.a(iii) is not planned and the Permittee could not have known about the inspection 30 days in advance or refilling the tank, the Permittee shall notify the EPA and the Department at least 7 days prior to the refilling of

the 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 so that it is received by the EPA and the Department at least 7 days prior to the refilling.

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

94.3. **Alternative Monitoring Plan for EU IDs 108 and 123** ***[Tank 96 and Tank 723]*****.** As allowed under the EPA-approved AMPs issued December 27, 2003 (for the wastewater tank, EU ID 108) and August 25, 2014 (for the oil-water separator tank, EU ID 123), the Permittee shall comply with the alternative monitoring provisions for the EUs according to the procedures of NSPS Subpart Kb 40 C.F.R. 60.113b(a)(1), (2), (4), and (5), as follows:

[US EPA Region X AMP, 12/29/03, and 8/25/2014
[40 C.F.R. 60.13(i), Subpart A]
[40 C.F.R. 60.113b(a)(1), (2), (4), and (5), Subpart Kb]
[40 C.F.R. 60.693-2(a) & 60.695-(c), Subpart QQQ]

a. After installing pollution control equipment consistent with Condition 91.3.b but prior to initially filling each of EU IDs 108 and 123 with refinery wastewater, visually inspect and repair the pollution control equipment, as specified in §60.113b(a)(l) (see Condition 94.2.a(i)).

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

b. Thereafter, for EU IDs 108 and 123, comply with one of the following two NSPS Subpart Kb inspection and repair schedules:

(i) At least once every 12 months after initial fill, visually inspect and repair the pollution control equipment as specified in §60.l13b(a)(2) (see Condition 94.2.a(ii)). Each time the vessel is emptied and degassed, visually inspect and repair the pollution control equipment as specified in §60.l13b(a)(4) (see Condition 94.2.a(iii)). In no event shall inspections conducted under §60. l13b(a)(4) occur at intervals greater than 10 years; OR

(ii) Each time the vessel is emptied and degassed, visually inspect and repair the pollution control equipment as specified in §60.l13b(a)(4) (see Condition 94.2.a(iii)). In no event shall inspections conducted under §60.113b(a)(4) occur at intervals greater than 5 years.

[40 C.F.R. 60.113b(a)(2) & (a)(4), Subpart Kb]

c. Notify the EPA and the Department of inspection activity consistent with §60.l13b(a)(l)(5) (see Condition 94.2.b).

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

95. NSPS Subpart QQQ Performance Test Method Procedures and Compliance Provisions. The Permittee shall comply with the applicable procedures and provisions required by 40 C.F.R. 60.696 for performance testing and compliance determinations, as follows:

[18 AAC 50.040(a)(2)(GG) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i)]
[40 C.F.R. 60.696(a) – (d), Subpart QQQ]

95.1. Before using any equipment installed in compliance with the requirements of Conditions 91.1 through 91.4, the Permittee shall inspect such equipment for indications of potential emissions, defects, or other problems that may cause the requirements of this subpart not to be met. Points of inspection shall include, but are not limited to, seals, flanges, joints, gaskets, hatches, caps, and plugs.

[40 C.F.R. 60.696(a), Subpart QQQ]

95.2. For each affected emissions unit that is equipped with a closed vent system (EU IDs 109, 118, and 137) and control device (EU IDs 108, 109, 118, 123, 124, 125, 135, 136, and 137), as required in Condition 91.4, the Permittee is exempt from 40 C.F.R. 60.8 Subpart A (Condition 59) and shall use Method 21 to measure the emission concentrations, using 500 ppm as the no detectable emission limit. The instrument shall be calibrated each day before using. The calibration gases shall be:

a. zero air (less than 10 ppm of hydrocarbon in air), and

b. 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.

[40 C.F.R. 60.696(b), Subpart QQQ]

96. NSPS Subpart QQQ Recordkeeping. The Permittee shall maintain the records required by 40 C.F.R. 60.697 for a period of two years after being recorded, unless otherwise noted, as follows:

[18 AAC 50.040(a)(2)(GG) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii)]
[40 C.F.R. 60.697(a), Subpart QQQ]
[USEPA Region X AMP, 8/25/1997]

96.1. For EU IDs 109, 118, and 137 sewer lines subject to Condition 91.1.b, the location, date, and corrective action shall be recorded for inspections required by Condition 91.1.b when a problem is identified that could result in VOC emissions.

[40 C.F.R. 60.697(b)(3), Subpart QQQ]

96.2. For EU IDs 109, 118, and 137 closed vent systems subject to Condition 91.4.b and completely closed drain systems subject to Condition 91.1, the location, date, and corrective action shall be recorded for inspections required by Condition 91.4.b during which detectable emissions are measured or a problem is identified that could result in VOC emissions.

[40 C.F.R. 60.697(d), Subpart QQQ]

96.3. For EU IDs 109, 118, and 137, keep in a readily accessible location records of the information listed under 40 C.F.R. 60.697(f)(3)(i) through (vii) and (x)(B) pertaining to the operation and maintenance of closed drain systems and closed vent systems.

[40 C.F.R. 60.697(f)(3), Subpart QQQ]

96.4. For EU IDs 109, 118, and 137, if the Permittee elects to install a tightly sealed cap or plug over a drain that is out of active service, the Permittee shall keep for the life of the facility in a readily accessible location, plans or specifications which indicate the location of such drains.

[40 C.F.R. 60.697(g), Subpart QQQ]

96.5. For EU IDs 124, 125, 135, and 136 subject to standards for oil-water separators in Condition 91.2, the location, date, and corrective action shall be recorded for inspections required by Condition 91.2.a when a problem is identified that could result in VOC emissions.

[40 C.F.R. 60.697(c), Subpart QQQ]

96.6. For EU IDs 108, 109, 118, 123, 124, 125, 135, 136, and 137, if an emission point cannot be repaired or corrected without a process unit shutdown, the following shall be recorded.

a. the expected date of a successful repair;

b. the reason for the delay as specified in Condition 92, if an emission point or equipment problem is not repaired or corrected in the specified amount of time;

c. the signature of the owner or operator (or designee) whose decision it was that repair could not be effected without refinery or process shutdown; and

d. the date of successful repair or corrective action

[40 C.F.R. 60.697(e)(1) – (4), Subpart QQQ]

96.7. For EU IDs 108, 109, 118, 123, 124, 125, 135, 136, and 137, keep for the life of the affected EU in a readily accessible location records of the following information pertaining to the design specifications for all equipment used to comply with the provisions of this subpart:

a. detailed schematics, and piping and instrumentation diagrams; and

b. the dates and descriptions of any changes in the design specifications.

[40 C.F.R. 60.697(f)(1) – (2), Subpart QQQ]

96.8. For EU IDs 105 and 106 and EU IDs 118 and 123, the Permittee shall:

a. Keep records of the following for a period of five (5) years after the generation of such documentation:

(i) each inspection performed pursuant to Conditions 94.2 and 94.3;

(ii) EU ID of the storage vessel on which the inspection was performed;

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

(iv) all reports submitted pursuant to Conditions 94.2.b and 94.3.c;

b. Keep records of the August 25, 1997, December 29, 2003, and August 25, 2014 AMPs permanently, or until any of the AMPs has been replaced with a different alternative monitoring plan for EU IDs 105, 106, 118 and 123 are permanently taken out of service.

[18 AAC 50.040(j)(4) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(ii) and (c)(6)]
[USEPA Region X AMP, 8/25/1997]

97. NSPS Subpart QQQ Reporting. For EU IDs 105, 106, 108, 109, 118, 123, 124, 125, 135, 136, and 137, 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 205. The Permittee shall include the following in the reports:

[18 AAC 50.040(a)(2)(GG) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)]

97.1. A certification that all of the inspections required in Conditions 91.1 through 91.4 have been carried out in accordance with these standards.

[40 C.F.R. 60.698(b)(1), Subpart QQQ]

97.2. A report that summarizes all inspections when a water seal was dry or otherwise breached, when a drain cap or plug was missing or improperly installed, or when cracks, gaps, or other problems were identified that could result in VOC emissions, including information about the repairs or corrective action taken.

[40 C.F.R. 60.698(c), Subpart QQQ]

97.3. A report that indicates each three-hour period of operation during which the average VOC concentration level or reading of organics in the exhaust gases from a carbon adsorber is more than 20 percent greater than the design exhaust gas concentration level or reading:

a. Each three-hour period of operation during which the average VOC concentration level or reading of organics in the exhaust gases from a carbon adsorber which is regenerated directly onsite is more than 20 percent greater than the design exhaust gas concentration level or reading.

b. Each occurrence when the carbon in a carbon adsorber system that is not regenerated directly onsite in the control device is not replaced at the predetermined interval specified in Condition 94.1.a(i).

[40 C.F.R. 60.698(d)(3)(i) & (ii), Subpart QQQ]

97.4. If compliance with the provisions of this subpart is delayed pursuant to Condition 93, the notification required under 40 CFR 60.7(a)(4) (Condition 54.3) shall include the estimated date of the next scheduled refinery or process unit shutdown after the date of notification and the reason why compliance with the standards is technically impossible without a refinery or process unit shutdown.

[40 C.F.R. 60.698(e), Subpart QQQ]

97.5. For EU IDs 105 and 106 and EU IDs 118 and 123, the Permittee shall report as follows:

a. If any of the conditions described in Conditions 94.2.a(i), 94.2.a(ii), and 94.2.a(iii)(A), monitoring plan are detected during the annual visual inspection and during each time the storage vessel is emptied and degassed, furnish a report to the EPA within 30 days of the inspection.

b. 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.

[18 AAC 50.040(j)(4) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(iii) and (c)(6)]
[USEPA Region X AMP, 8/25/1997]

NSPS Subpart JJJJ[48] – Stationary Spark Ignition Internal Combustion Engines (SI ICE)

98. NSPS Subpart JJJJ Applicability and General Requirements. For EU ID 121 listed in Table A, the Permittee shall comply with the applicable requirements for an emergency stationary spark ignition (SI) internal combustion engine (ICE) whose construction[49] commenced after June 12, 2006 and manufactured on or after January 1, 2009.

98.1. The Permittee shall comply with the applicable provisions in 40 C.F.R. 60 Subpart A as specified in Table 3 to Subpart JJJJ, and applicable provisions of Subpart JJJJ as specified in Conditions 99 through 103.

[18 AAC 50.040(a)(2)(PP) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4230(a)(4)(iv), 60.4246 & Table 3, Subpart JJJJ]

99. NSPS Subpart JJJJ GAPCP. Operate and maintain EU IDs 121[50] and control device according to the manufacturer's emission-related written instructions, meet the applicable emissions standards in Condition 100 over the entire life of the engine, and keep records of conducted maintenance to demonstrate compliance with the standards. In addition, the Permittee may only adjust engine settings according to and consistent with the manufacturer's instructions.

99.1. It is expected that air-to-fuel ratio (AFR) controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction (NSCR). The Permittee shall maintain and operate the AFR controller appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

[18 AAC 50.040(a)(2)(PP) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

[48] The provisions of NSPS Subpart JJJJ listed in Conditions 98 through 103 are current as of August 10, 2022. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

[49] For the purposes of NSPS Subpart JJJJ, the date that construction commences is the date the engine is ordered by the owner or operator as defined in 40 C.F.R. 60.4230(a).

[50] Cummins Inc., manufacturer of EU ID 121, was issued by the EPA a 2012 Model Year Certificate of Conformity dated 12/01/2011 for engine family of NG-fired new nonroad spark-ignition engines.

[40 C.F.R. 60.4234 and 60.4243(a)(1), (b)(1) & (g), Subpart JJJJ]

100. NSPS Subpart JJJJ Emission Standards. For EU ID 121, the Permittee shall comply with the following emission standards:

[18 AAC 50.040(a)(2)(PP) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

100.1. Exhaust emission from EU ID 121 (stationary emergency engine ≥130) shall not exceed the following applicable exhaust emission standards:

a. 2.0 g/Hp-hr for NO_x;

b. 4.0 g/Hphr for CO; and

c. 1.0 g/Hphr for VOC.

100.2. For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included.

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

101. NSPS Subpart JJJJ Monitoring and Recordkeeping. For EU ID 121, the Permittee shall comply with the following:

[18 AAC 50.040(a)(2)(PP) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i) & (ii) and (c)(6)]

101.1. Demonstrate compliance with the emission standards in Condition 100 by purchasing an engine certified according to procedures specified in this Subpart JJJJ, for the same model year and by complying with Condition 99.

[40 C.F.R. 60.4243(b)(1), Subpart JJJJ]

101.2. The Permittee shall comply with the following requirements for emergency stationary SI ICE, EU ID 121, under Subpart JJJJ:

a. Operate EU ID 121 according to the requirements in Conditions 101.2.a(i) through 101.2.a(iii). In order for the engine to be considered an emergency stationary ICE, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in Conditions 101.2.a(i) through 101.2.a(iii), is prohibited. If the Permittee does not operate the engine according to the requirements in Conditions 101.2.a(i) through 101.2.a(iii), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(i) There is no time limit on the use of emergency stationary ICE in emergency situations.

(ii) The Permittee may operate EU ID 121 for the purposes specified in Condition 101.2.a(ii)(A) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 101.2.a(iii) counts as part of the 100 hours per calendar year allowed by this Condition 101.2.a(ii).

(A) EU ID 121 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 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.

(iii) EU ID 121 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 provided in Condition 101.2.a(ii). The 50 hours per calendar 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.

[40 C.F.R. 60.4243(d)(1) – (3), Subpart JJJJ]

101.3. Keep records of the hours of operation of EU ID 121 that are recorded through the non-resettable hour meter, as follows:

a. how many hours are spent for emergency operation, including what classified the operation as emergency; and

b. how many hours are spent for non-emergency operation.

[40 C.F.R. 60.4245(b), Subpart IIII]

101.4. Keep records of the following:

a. All notifications submitted to comply with Subpart JJJJ and all documentations supporting any notification;

b. Maintenance conducted on the engine; and

c. Documentation from the manufacturer that the engine is certified to meet the emission standards in Condition 100.1.

[40 C.F.R. 60.4245(a)(1) – (3)]

102. NSPS Subpart JJJJ Reporting. For EU ID 121, the Permittee shall report, as follows:

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

102.1. Include with the operating report required under Condition 205 the records required in Condition 101.3 for the period covered by the report.

102.2. Report in accordance with Condition 204 if any of the requirements in Conditions 98 through 103 was not met.

103. NSPS Subpart JJJJ Deadline for Importing or Installing Stationary SI ICE in Previous Model Years. The Permittee shall comply with the following:

[18 AAC 50.040(a)(2)(PP) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4230(a)(6) and 60.4236(a) – (e), Subpart JJJJ]

103.1. The Permittee shall not install the following stationary SI ICE units:

a. after July 1, 2010, units with a maximum engine power of less than 500 Hp that do not meet the applicable requirements in 40 C.F.R. 60.4233.

[40 C.F.R. 60.4236(a), Subpart JJJJ]

b. after July 1, 2009, units with a maximum engine power of greater than or equal to 500 Hp that do not meet the applicable requirements in 40 C.F.R. 60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 Hp and less than 1,350 Hp that do not meet the applicable requirements in 40 C.F.R. 60.4233 shall not be installed after January 1, 2010.

[40 C.F.R. 60.4236(b), Subpart JJJJ]

c. after January 1, 2011, emergency units with a maximum engine power of greater than 19 kW (25 Hp) that do not meet the applicable requirements in 40 C.F.R. 60.4233.

[40 C.F.R. 60.4236(c), Subpart JJJJ]

103.2. In addition to the requirements specified in 40 C.F.R. 60.4231 and 60.4233, the Permittee shall not import stationary SI ICE less than or equal to 19 kW (25 Hp), stationary rich burn LPG SI ICE, and stationary gasoline SI ICE that do not meet the applicable requirements specified in Conditions 103.1 through 103.1.c, after the date specified in Conditions 103.1 through 103.1.c.

[40 C.F.R. 60.4236(d), Subpart JJJJ]

103.3. The requirements of Condition 103 do not apply to stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

[40 C.F.R. 60.4236(e), Subpart JJJJ]

NSPS Subpart KKKK – Turbines

104. NSPS Subpart KKKK Applicability. For EU IDs 32A and 33A *[GT-1400A, and GT-1410A]* listed in Table A, the Permittee shall comply with the applicable requirements for stationary combustion turbine with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005.

[18 AAC 50.040(a)(2)(QQ) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4305(a), Subpart KKKK]

105. NSPS Subpart KKKK GAPCP. The Permittee shall operate and maintain EU IDs 32A and 33A *[GT-1400A, and GT-1410A]*, 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) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4333(a), Subpart KKKK]

106. NSPS Subpart KKKK NO_x Standards. The Permittee shall not allow the exhaust gas concentration of NO_x from EU IDs 32A and 33A *[GT-1400A and GT-1410A]* listed in Table A, to exceed the following:

[18 AAC 50.040(a)(2)(QQ) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

106.1. For EU IDs 32A and 33A:

a. 42 ppm at 15 percent O_2 or 250 ng/J of useful output, or 2.0 lb/MWh, when firing natural gas, or

b. 96 ppm at 15 percent O_2 or 590 ng/J of useful output, or 4.7 lb/MWh, when firing fuels other than natural gas; and

c. 150 ppm at 15 percent O_2 or 1,100 ng/J of useful output, or 8.7 lb/MWh, when operating at less than 75 percent of peak load, or operating at ambient temperatures less than 0 °F.

[40 C.F.R. 60.4320(a) & Table 1, Subpart KKKK]

107. NSPS Subpart KKKK NO_x MR&R. The Permittee shall monitor, record, and report compliance with the NO_x emissions standards under Condition 106, as follows:

[18 AAC 50.040(a)(2)(QQ) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i) – (iii)]

107.1. **Monitoring.** To demonstrate continuous compliance with the NO_x emissions standards under Condition 106.1 for EU IDs 32A and 33A, conduct performance tests in accordance with Condition 107.2 and as follows:

a. If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit in Condition 106, the Permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test).

b. If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit in Condition 106, the Permittee must resume annual performance tests (no more than 14 calendar months following the previous performance test) until the requirements in Condition 107.1.a are met.

[40 C.F.R. 60.4340(a) and 63.4400(a), Subpart KKKK]

107.2. **Performance Tests**. The Permittee shall conduct performance tests as follows:

a. Subsequent NO_x performance tests for EU IDs 32A and 33A shall be conducted on an annual or bi-annual basis, as specified in Conditions 107.1.a and 107.1.b.

[40 C.F.R. 60.4400(a) and 60.4405, Subpart KKKK]

b. The Permittee may use either one of the two methodologies described below in Conditions 107.2.b(i) or 107.2.b(ii) to conduct performance test. For each test run:

(i) Measure the NO_x concentration (in ppm), using EPA Method 7E or EPA Method 20 in Appendix A of 40 C.F.R 60. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in Appendix A of 40 C.F.R 60, and measure and record the electrical and thermal output from the unit. Then, use the following equation to calculate the NO_x emission rate:

$$E=\frac{\left(1.194\times10^{-7}\right)\times(NO_x)_c\times(Q_{std})}{P}$$

Where:

E	=	NO_x emission rate, in lb/MWh
$1.194 \text{ X } 10^{-7}$	=	conversion constant, in lb/(dscf-ppm)
$(NO_x)_c$	=	average NO_x concentration for the run, in ppm
Q_{std}	=	stack gas volumetric flow rate, in dcf/hr
P	=	gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to 40 C.F.R. 60.4350(f)(2); or

(ii) Measure the NO_x and diluent gas concentrations, using either EPA Methods 7E and 3A, or EPA Method 20 in Appendix A of 40 C.F.R. 60. Concurrently measure the heat input to the unit, using a fuel flow meter(s), and measure the electrical and thermal output of the unit. Use EPA Method 19 in Appendix A of 40 C.F.R. 60 to calculate the NO_x emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in 40 C.F.R. 60.4350(f) to calculate the NO_x emission rate in lb/MWh.

[40 C.F.R. 60.4400(a)(1), Subpart KKKK]

c. Sampling traverse points for NO_x and (if applicable) diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary

multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

[40 C.F.R. 60.4400(a)(2), Subpart KKKK]

d. Notwithstanding Condition 107.2.c, test at fewer points than are specified in EPA Method 1 or EPA Method 20 in Appendix A 40 C.F.R. 60 if the following conditions are met:

(i) Perform a stratification test for NO_x and diluent pursuant to the procedures specified in Section 6.5.6.1(a) through (e) of Appendix A of 40 C.F.R. 75;

(ii) Once the stratification sampling is completed, use the following alternative sample point selection criteria for the performance test:

(A) If each of the individual traverse point NO_x concentrations is within ±10 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±5 ppm or ±0.5 percent CO_2 (or O_2) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NO_x concentration during the stratification test; or

(B) Sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NO_x concentrations is within ±5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±3 ppm or ±0.3 percent CO_2 (or O_2) from the mean for all traverse points.

[40 C.F.R. 60.4400(a)(3), Subpart KKKK]

e. The Permittee shall conduct performance test, as follows:

(i) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load.

(ii) The Permittee may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice; and

(iii) The Permittee must conduct three separate test runs for each performance test at a minimum time of 20 minutes per run.

[40 C.F.R. 60.4400(b), Subpart KKKK]

f. For EU IDs 32A and 33A that combust both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.

[40 C.F.R. 60.4400(b)(1), Subpart KKKK]

g. Compliance with the applicable emission limit under Condition 106 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 in Condition 106.

[40 C.F.R. 60.4400(b)(4), Subpart KKKK]

h. The performance evaluation of the CEMS may either be conducted separately; or when using a NO_x-diluent CEMS, as part of the initial performance test of the affected unit.

[40 C.F.R. 60.4400(b)(5), Subpart KKKK]

i. The ambient temperature must be greater than 0 °F during the performance test.

[40 C.F.R. 60.4400(b)(6), Subpart KKKK]

107.3. The Permittee shall keep records of all performance tests data in accordance with Condition 200.

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

107.4. For EU IDs 32A and 33A *[GT-1400A and GT-1410A]* listed in Table A, the Permittee shall report as follows:

a. Submit a written report of the results of each performance test required under Condition 107.1 before the close of business on the 60th day following the completion of the performance test and in accordance with Condition 198.

[40 C.F.R. 60.4375(b); Subpart KKKK]

b. Include with the operating report required under Condition 205 a summary of the results of each performance test conducted during the reporting period.

c. Report in accordance with Condition 204 if any of the requirements in Conditions 106 through 107.4 was not met.

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

108. NSPS Subpart KKKK SO_2 Standard. The Permittee shall not burn in EU IDs 32A and 33A *[GT-1400A and GT-1410A],* listed in Table A, any fuel which contains total potential sulfur emissions in excess of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4330(a)(2), Subpart KKKK]

109. NSPS Subpart KKKK SO_2 Monitoring. The Permittee shall use the information sources in either Condition 109.1 or 109.2 to demonstrate that the fuel combusted in EU IDs 32A and 33A meets the SO_2 standard in Condition 108:[51]

[18 AAC 50.040(j)(4) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(i) and 71.6(c)(6)]
[40 C.F.R. 60.4365, Subpart KKKK]

109.1. The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content of the fuel is as follows:

a. 0.05 weight percent (500 ppmw) or less for diesel fuel oil;

b. 20.0 grains/100 scf or less for NG; and

c. 0.03 lb/MMBtu SO_2 for RG, in accordance with Condition 70.1[52]; or

109.2. Representative fuel sampling data, which show that the sulfur content of the fuel does not exceed the SO_2 standard in Condition 108. 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.

110. NSPS Subpart KKKK SO_2 Recordkeeping. In accordance with Condition 200, keep records of documents or sampling data that show the maximum total sulfur content of fuel burned in EU IDs 32A and 33A, as required by Conditions 109.1 and 109.2.

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

111. NSPS Subpart KKKK SO_2 Reporting. The Permittee shall report as follows:

111.1. Include with the operating report required under Condition 205 a copy of the records required in Conditions 110 for the period covered by the report.

111.2. Report in accordance with Condition 204 if any of the requirements in Conditions 108 through 111 was not met.

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

NSPS Subparts GGGa/VVa – Equipment Leaks of VOC in the Synthetic Chemicals Manufacturing Industry

112. NSPS Subpart GGGa/VVa Standards and Applicability. The Permittee shall comply with the applicable requirements of 40 C.F.R. 60.592a in Subpart GGGa and associated requirements of 40 C.F.R. 60.482-1a through 60.482-10a in Subpart VVa, as provided in

[51] The Permittee has elected not to monitor the total sulfur content of the fuel combusted in the affected turbines, as allowed under 40 C.F.R. 60.4365.

[52] The NSPS Subpart Ja H_2S standard in Condition 70.1 of 162 ppmv H_2S is equivalent to approximately 0.03 lb/MMBtu SO_2, depending on the heating value of the RG.

Conditions 113 through 122, for affected equipment[53] located in EU IDs 42, 96 – 104, 111, 112, 117, 119, and 126 – 128 *[J-801, Crude Unit, Powerformer, LPG Unit, Hydrocracker, Hydrogen Unit, PRIP Unit, DIB Unit, Vacuum Unit, tank farm fugitives, Refinery fugitives, DDU Unit, C-810A, C-810B, and Amine Unit]*, listed in Table A, *in VOC service* as defined in 40 C.F.R. 60.481a in Subpart VVa[54] and *in Organic HAP service* as defined in 40 C.F.R. 63.641 in Subpart CC.[55]

[18 AAC 50.040(a)(2)(UU) & (VV), 50.040(j)(4), and 50.326(j)]
[40 C.F.R. 60.590a(a)(1) & (3), 60.592a(a) - (e), Subpart GGGa]
[40 C.F.R. 60.480a(a) - (e), 60.482-1a - 60.487a Subpart VVa]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]
[Minor Permit AQ0035MSS07, Condition 5.a, June 29, 2022]

112.1. Alternatively, the Permittee may choose to comply with the provisions of 40 C.F.R. 65, Subpart F (Consolidated Federal Air Rule, Equipment Leaks) or 40 C.F.R. 63, Subpart H (NESHAP, Organic HAPs for Equipment Leaks), to satisfy the requirements of Conditions 113 through 124, in accordance with 40 C.F.R. 60.480a(e).

[40 C.F.R. 60.480a(e)(1) & (2), Subpart VVa]

112.2. For a given process unit[56], as an alternative to the requirements in Condition 119, the Permittee may elect to comply with the requirements of:

a. 40 C.F.R. 60.483-1a, as set out in Condition 123.1; or

b. 40 C.F.R. 60.483-2a, as set out in Condition 123.2; or

c. Phase III provisions in 40 C.F.R. 63.168 (NESHAP Subpart H, Standards for valves in gas/vapor service and in light liquid service), except the Permittee may elect to follow the provisions in Condition 119.6 instead of §63.168 for any valve that is designated as being leakless.

[40 C.F.R. 60.592a(b)(1) - (3), Subpart GGGa]

112.3. The Permittee shall comply with the test methods and procedures required under Condition 124.1, except as provided in Condition 120.4 and as follows:

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[53] As defined by 40 C.F.R. § 60.591a Subpart GGGa: "*Equipment* means each valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in VOC service. For the purposes of recordkeeping and reporting only, compressors (EU IDs 126 and 127) are considered equipment."

[54] As defined in 40 C.F.R. 60.481a Subpart VVa, *in VOC service* means that the piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight. The provisions of 40 C.F.R. 60.485a(d) specify how to determine that a piece of equipment is not in VOC service.

[55] As defined in 40 C.F.R. 63.641 Subpart CC, i*n organic hazardous air pollutant service* or *in organic HAP service* means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP as determined according to the provisions of 40 C.F.R. 63.180(d) Subpart H and Table 1 of 40 C.F.R. 63 Subpart CC. The provisions of 40 C.F.R. 63.180(d) also specify how to determine that a piece of equipment is not in organic HAP service.

[56] As defined by 40 C.F.R. § 60.591a Subpart GGGa: "*Process unit"* means the components assembled and connected by pipes or ducts to process raw materials and to produce intermediate or final products from petroleum, unfinished petroleum derivatives, or other intermediates. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product. For the purpose of this subpart, process unit includes any feed, intermediate and final product storage vessels (except as specified in §60.482-1a(g)), product transfer racks, and connected ducts and piping. A process unit includes all equipment as defined in this subpart. .

a. In addition to Condition 124.1.e, the Permittee may use the following provision: Equipment is in light liquid service if the percent evaporated is greater than 10 percent at 150 °C as determined by ASTM Method D86-78, 82, 90, 93, 95, or 96 (incorporated by reference as specified in §60.17).

[40 C.F.R. 60.592a(d) and 60.593a(d), Subpart GGGa]

112.4. Monitor, record, and report in accordance with the applicable requirements in §60.485a through 60.487a, as set out in Condition 124.

[40 C.F.R. 60.592a(d) & (e), Subpart GGGa]

113. General Standards in §60.482-1a. Except as provided in Condition 112.1, the Permittee shall comply with the general requirements in §60.482-1a, as follows:

[40 C.F.R. 60.482-1a(b)-(e), Subpart VVa]

113.1. Determine compliance with Conditions 113 – 122 by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in Condition 124.1.

[40 C.F.R. 60.482-1a(b) and 60.485a, Subpart VVa]

113.2. The Permittee may apply to the Administrator for a determination of equivalence of a means of emission limitation to the requirements of Conditions 114 through 122 as provided in 40 C.F.R. 60.484a (Equivalence of means of emission limitation). If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of Conditions 114 through 122, the Permittee shall comply with the requirements of that determination.

[40 C.F.R. 60.592a(c), Subpart GGGa]
[40 C.F.R. 60.482-1a(c) and 60.484a, Subpart VVa]

113.3. Equipment that is in vacuum service is excluded from the requirements of Conditions 114 through 122 if it is identified as such, as required in Condition 124.2.g(v). In vacuum service means that equipment is operating at an internal pressure which is at least 5 kilopascals (kPa) (0.7 psia) below ambient pressure.

[40 C.F.R. 60.481a and 60.482-1a(d), Subpart VVa]

113.4. Equipment that the Permittee designates as being in VOC service less than 300 hours per year is excluded from the requirements of Conditions 114 through 122 if it is identified, as required in Condition 124.2.g(vi) and it meets any of the following conditions:

a. The equipment is in VOC service only during startup and shutdown, excluding startup and shutdown between batches of the same campaign for a batch process;

b. The equipment is in VOC service only during process malfunctions or other emergencies; and

c. The equipment is backup equipment that is in VOC service only when the primary equipment is out of service.

[40 C.F.R. 60.482-1a(e), Subpart VVa]

113.5. If a dedicated batch process unit operates less than 365 days during a year, the Permittee may monitor to detect leaks from pumps, valves, and open-ended valves or lines at the frequency specified in §§60.482-1a(f)(1) through (3) instead of monitoring as specified in Conditions 114, 119, and 123.2.

[40 C.F.R. 60.482-1a(f)(1) – (3), Subpart VVa]

114. Pumps in light liquid service in §60.482-2a. The Permittee shall monitor each pump in light liquid service, as follows:

114.1. Except as provided in Conditions 113.2, 113.5, 114.5, 114.6, and 114.7, detect leaks on a monthly basis by the methods specified in Conditions 124.1.a and 124.1.b.

a. For a pump that begins operation in light liquid service after the initial startup date for the process unit, monitor for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump.

b. Check by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in Condition 113.5.

[40 C.F.R. 60.482-2a(a), Subpart VVa]

114.2. The instrument reading that defines a leak is specified as follows:

a. 5,000 parts per million (ppm) or greater for pumps handling polymerizing monomers;

b. 2,000 ppm or greater for all other pumps.

[40 C.F.R. 60.482-2a(b)(1), Subpart VVa]

114.3. If there are indications of liquids dripping from the pump seal, the Permittee shall follow the procedure specified in either Conditions 114.3.a or 114.3.b. This requirement does not apply to a pump that was monitored after a previous weekly inspection and the instrument reading was less than the concentration specified in Conditions 114.2.a or 114.2.b, whichever is applicable.

a. Monitor the pump within 5 days as specified in Conditions 124.1.a and 124.1.b. A leak is detected if the instrument reading measured during monitoring indicates a leak as specified in Conditions 114.2.a or 114.2.b, whichever is applicable. The leak shall be repaired using the procedures in Condition 114.4.

b. Designate the visual indications of liquids dripping as a leak, and repair the leak using either the procedures in Condition 114.4 or by eliminating the visual indications of liquids dripping.

[40 C.F.R. 60.482-2a(b)(2), Subpart VVa]

114.4. When a leak is detected, the Permittee shall

a. repair the leak as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition 122;

b. make a first attempt at repair no later than 5 calendar days after each leak is detected; first attempts at repair include, but are not limited to, the practices described in Conditions 114.4.b(i) and 114.4.b(ii) below, where practicable:

(i) Tightening the packing gland nuts;

(ii) Ensuring that the seal flush is operating at design pressure and temperature.

[40 C.F.R. 60.482-2a(c), Subpart VVa]

114.5. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of Condition 114.1, provided the following requirements are met:

a. Each dual mechanical seal system is:

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipped with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of Condition 121; or

(iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

b. The barrier fluid system is in heavy liquid service or is not in VOC service.

c. Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

d. Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the Permittee shall, prior to the next required inspection, comply with either one of the following procedures:

(i) Monitor the pump within 5 days as specified in Conditions 124.1.a and 124.1.b to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 2,000 ppm or greater is measured, a leak is detected; or

(ii) Designate the visual indications of liquids dripping as a leak.

e. Each sensor as described in Condition 114.5.c is checked daily or is equipped with an audible alarm.

(i) The Permittee determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(ii) If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established in Condition 114.5.e(i), a leak is detected.

f. When a leak is detected pursuant to Condition 114.5.d(i), the Permittee shall

(i) repair the leak as specified in Condition 114.4.

(ii) repair a leak, detected pursuant to Condition 114.5.e(ii), within 15 days of detection by eliminating the conditions that activated the sensor; and

(iii) repair a designated leak pursuant to Condition 114.5.d(ii) within 15 days of detection by eliminating visual indications of liquids dripping.

[40 C.F.R. 60.482-2a(d)(1) – (6), Subpart VVa]

114.6. Any pump that is designated, as described in Conditions 124.2.g(i) and 124.2.g(ii), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Conditions 114.1, 114.4, and 114.5, if the pump:

a. has no externally actuated shaft penetrating the pump housing;

b. is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in §60.485a(c); and

c. is tested for compliance with Condition 114.6.b initially upon designation, annually, and at other times requested by the Administrator.

[40 C.F.R. 60.482-2a(e)(1) – (3), Subpart VVa]

114.7. Any pump equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of Condition 121 is exempt from Conditions 114.1 - 114.6.

[40 C.F.R. 60.482-2a(f), Subpart VVa]

114.8. Any pump that is designated, as described in Condition 124.2.h(i), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of Conditions 114.1 and 114.5.d through 114.5.f, if the Permittee:

a. demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section; and

b. has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in Condition 114.4 if a leak is detected.

[40 C.F.R. 60.482-2a(g)(1) – (2), Subpart VVa]

115. Compressors Standards in §60.482-3a. The Permittee shall comply with the following requirements for compressors (EU IDs 126 and 127), as follows:

115.1. Equip each compressor with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in Conditions 113.2, 115.6, and 115.7. The Permittee shall operate the seal system as follows:

a. Operate with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

b. Equip with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of Condition 121; or

c. Equip with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

[40 C.F.R. 60.482-3a(a) &(b), Subpart VVa]

115.2. Each barrier fluid system as described in Condition 115.1 shall be

a. in heavy liquid service or shall not be in VOC service; and

b. equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both; each sensor shall be checked daily or shall be equipped with an audible alarm.

[40 C.F.R. 60.482-3a(c), (d) &(e)(1), Subpart VVa]

115.3. Determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

[40 C.F.R. 60.482-3a(e)(2), Subpart VVa]

115.4. If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.

[40 C.F.R. 60.482-3a(f), Subpart VVa]

115.5. When a leak is detected, the Permittee shall

a. repair the leak as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition 122;

b. make a first attempt at repair no later than 5 calendar days after each leak is detected.

[40 C.F.R. 60.482-3a (g), Subpart VVa]

115.6. The Permittee is exempt from the requirements of Condition 115.1, if the compressor is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of Condition 121, except as provided in Condition 115.7.

[40 C.F.R. 60.482-3a(h), Subpart VVa]

115.7. Any compressor that is designated, as described in Condition 124.2.g(ii), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Conditions 115.1 through 115.6 if the compressor is:

a. demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the methods specified in Condition 124.1.c; and

b. tested for compliance with Condition 115.7.a initially upon designation, annually, and at other times requested by the Administrator.

[40 C.F.R. 60.482-3a(i), Subpart VVa]

115.8. Compressors in hydrogen service are exempt from the requirements of Conditions 113 through 124 if the Permitteee demonstrates that the compressor is in hydrogen service, as specified in 40 C.F.R. 60.593a(b)(1) – (3).

[40 C.F.R. 60.593a(b)(1) – (3), Subpart GGGa]

116. Pressure relief devices in gas/vapor service in §60.482-4a. For pressure relief devices in gas/vapor service, the Permittee shall comply with the following:

[40 C.F.R. 60.482-4a(a) – (d), Subpart VVa]

116.1. Except during pressure releases, operate each pressure relief device in gas/vapor service with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in Condition 124.1.c.

[40 C.F.R. 60.482-4a(a), Subpart VVa]

116.2. After each pressure release, return the pressure relief device to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in Condition 122.

a. No later than 5 calendar days after the pressure release, monitor the pressure relief device to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in Condition 124.1.c.

[40 C.F.R. 60.482-4a(b)(1) – (2), Subpart VVa]

116.3. Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in Condition 121 is exempted from the requirements of Conditions 116.1 and 116.2.

[40 C.F.R. 60.482-4a(c), Subpart VVa]

116.4. Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of Conditions 116.1 and 116.2., provided the Permittee complies with the following:

a. After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in Condition 122.

[40 C.F.R. 60.482-4a(d), Subpart VVa]

117. Sampling connection systems in §60.482-5a. For sampling connection systems, the Permittee shall comply with the following:

[40 C.F.R. 60.482-5a(a) – (c), Subpart VVa]

117.1. Equip each sampling connection system with a closed-purge, closed-loop, or closed-vent system, except as provided in Conditions 113.2 and 117.3.

[40 C.F.R. 60.482-5a(a), Subpart VVa]

117.2. Comply with the requirements specified in Condition 117.2.a – 117.2.d for each closed-purge, closed-loop, or closed-vent system required in Condition 117.1.

a. Gases displaced during filling of the sample container are not required to be collected or captured.

b. Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied.

c. Gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valve(s) after the valves are closed and the sample container is disconnected are not required to be collected or captured.

d. Each closed-purge, closed-loop, or closed-vent system shall be designed and operated to meet requirements in any of Conditions 117.2.d(i) through 117.2.d(iv).

(i) Return the purged process fluid directly to the process line.

(ii) Collect and recycle the purged process fluid to a process.

(iii) Capture and transport all the purged process fluid to a control device that complies with the requirements of Condition 121.

(iv) Collect, store, and transport the purged process fluid to any of the following systems or facilities:

(A) A waste management unit as defined in 40 C.F.R. 63.111, if the waste management unit is subject to and operated in compliance with the provisions of 40 C.F.R. 63, Subpart G, applicable to Group 1 wastewater streams;

(B) A treatment, storage, or disposal facility subject to regulation under 40 C.F.R. 262, 264, 265, or 266;

(C) A facility permitted, licensed, or registered by a state to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 C.F.R. part 261;

(D) A waste management unit subject to and operated in compliance with the treatment requirements of 40 C.F.R. 61.348(a), provided all waste management units that collect, store, or transport the purged process fluid to the treatment unit are subject to and operated in compliance with the management requirements of 40 C.F.R. 61.343 through 40 C.F.R. 61.347; or

(E) A device used to burn off-specification used oil for energy recovery in accordance with 40 C.F.R. 279, Subpart G, provided the purged process fluid is not hazardous waste as defined in 40 C.F.R. 261.

[40 C.F.R. 60.482-5a(b)(1) – (4), Subpart VVa]

117.3. In-situ sampling systems and sampling systems without purges are exempt from the requirements of Conditions 117.1 and 117.2.

[40 C.F.R. 60.482-5a(c), Subpart VVa]

118. Open-ended valves or lines in §60.482-6a. For open-ended valves or lines, the Permittee shall comply with the following:

[40 C.F.R. 60.482-6a(a) – (e), Subpart VVa]

118.1. Equip each open-ended valve or line with a cap, blind flange, plug, or a second valve, except as provided in Conditions 113.2, 118.4, and 118.5.

a. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

[40 C.F.R. 60.482-6a(a), Subpart VVa]

118.2. Operate each open-ended valve or line equipped with a second valve in a manner such that the valve on the process fluid end is closed before the second valve is closed.

[40 C.F.R. 60.482-6a(b), Subpart VVa]

118.3. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with Condition 118.1 at all other times.

[40 C.F.R. 60.482-6a(c), Subpart VVa]

118.4. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of Conditions 118.1 through 118.3.

[40 C.F.R. 60.482-6a(d), Subpart VVa]

118.5. Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in Conditions 118.1 through 118.3 are exempt from the requirements of Conditions 118.1 through 118.3.

[40 C.F.R. 60.482-6a(e), Subpart VVa]

118.6. Open-ended valves or lines containing asphalt as defined in §60.591a are exempt from Conditions 118.1 through 118.3.

[40 C.F.R. 60.593a(f), Subpart GGGa]

119. Valves in gas/vapor service and in light liquid service in §60.482-7a. For valves in gas/vapor service and in light liquid service, the Permittee shall monitor each valve for leaks, as follows:

[40 C.F.R. 60.482-7a(a) – (h), Subpart VVa]

119.1. Monitor monthly to detect leaks by the methods specified in Conditions 124.1.a and 124.1.b and shall comply with Conditions 119.3 – 119.5, except as provided in Conditions 119.6 – 119.8, 113.2, 113.5, 123.1, and 123.2.

[40 C.F.R. 60.482-7a(a)(1), Subpart VVa]

119.2. For a valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit, monitor according to Conditions 119.2.a and 119.2.b, except for a valve that replaces a leaking valve and except as provided in Conditions 119.6 – 119.8, 113.2, 113.5, 123.1, and 123.2.

a. Monitor the valve as in Condition 119.1. Monitor the valve for the first time within 30 days after the end of its startup period to ensure proper installation.

b. If the existing valves in the process unit are monitored in accordance with Condition 123.1 or Condition 123.2, count the new valve as leaking when calculating the percentage of valves leaking as described in Condition 123.2.d. If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first.

[40 C.F.R. 60.482-7a(a)(2)(i) – (ii), Subpart VVa]

119.3. If an instrument reading of 500 ppm or greater is measured, a leak is detected.

[40 C.F.R. 60.482-7a(b), Subpart VVa]

119.4. For any valve for which a leak is not detected for 2 successive months, the Permittee may monitor in the first month of every quarter, beginning with the next quarter, until a leak is detected.

a. As an alternative to monitoring all of the valves in the first month of a quarter, the Permittee may elect to subdivide the process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months.

[40 C.F.R. 60.482-7a(c)(1)(i) - (ii), Subpart VVa]

b. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

[40 C.F.R. 60.482-7a(c)(2), Subpart VVa]

119.5. When a leak is detected, the Permittee shall

a. repair the leak as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in Condition 122; and

b. make a first attempt at repair no later than 5 calendar days after each leak is detected; first attempts at repair include, but are not limited to, the following best practices where practicable:

(i) tightening of bonnet bolts;

(ii) replacement of bonnet bolts;

(iii) tightening of packing gland nuts; and

(iv) injection of lubricant into lubricated packing.

[40 C.F.R. 60.482-7a(d) - (e), Subpart VVa]

119.6. Any valve that is designated, as described in Condition 124.2.g(ii), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Conditions 119.1 and 119.2 if the valve:

a. has no external actuating mechanism in contact with the process fluid,

b. is operated with emissions less than 500 ppm above background as determined by the method specified in §60.485a(c), and

c. is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

[40 C.F.R. 60.482-7a(f)(1) – (3), Subpart VVa]

119.7. Any valve that is designated, as described in Condition 124.2.h(i), as an unsafe-to-monitor valve is exempt from the requirements of Conditions 119.1 and 119.2 if the Permittee:

a. demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section, and

b. adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

[40 C.F.R. 60.482-7a(g)(1) – (2), Subpart VVa]

119.8. Any valve that is designated, as described in Condition 124.2.h(ii), as a difficult-to-monitor valve is exempt from the requirements of Conditions 119.1 and 119.2 if:

a. The Permittee demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface;

b. The process unit within which the valve is located either:

(i) becomes an affected facility through §60.14 or §60.15 and was constructed on or before January 5, 1981; or

(ii) has less than 3.0 percent of its total number of valves designated as difficult-to-monitor by the owner or operator; and

c. The Permittee follows a written plan that requires monitoring of the valve at least once per calendar year.

[40 C.F.R. 60.482-7a(h)(1) – (3), Subpart VVa]

120. Pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service in §60.482-8a. The Permittee shall monitor leaks from pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service, as follows:

[40 C.F.R. 60.482-8a(a) – (d), Subpart VVa]

120.1. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service, the Permittee shall follow either one of the following procedures:

a. Monitor the equipment within 5 days by the method specified in Conditions 124.1.a and 124.1.b and comply with the requirements of Conditions 120.2 through 120.3.

b. Eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection.

[40 C.F.R. 60.482-8a(a), Subpart VVa]

120.2. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

[40 C.F.R. 60.482-8a(b), Subpart VVa]

120.3. When a leak is detected, the Permittee shall

a. repair the leak as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition 122; and

b. make first attempt at repair no later than 5 calendar days after each leak is detected; first attempts at repair include, but are not limited to, the best practices described under Conditions 114.4.b and 119.5.b

[40 C.F.R. 60.482-8a(c) & (d), Subpart VVa]

120.4. The Permittee shall comply with the requirements of 40 C.F.R. 60.482-8a in Conditions 120.1 through 120.3 for all connectors in heavy liquid service **and light liquid service** to be exempt from the requirements of §60.482-11a (standards for connectors in gas/vapor service and in light liquid service).

[40 C.F.R. 60.592a(d) and 60.593a(g), Subpart GGGa]
[40 C.F.R. 71.6(a)(1) & (3) and (c)(6)]

121. Closed vent systems and control devices in §60.482-10a. For closed vent systems and control devices used to comply with the provisions of Subpart VVa, the Permittee shall comply with the following:

[40 C.F.R. 60.482-10a(a), Subpart VVa]

121.1. For EU ID 42, flare used as a control device to comply with this subpart, comply with the requirements of Conditions 41 through 50, in addition to the applicable requirements under Subpart CC provided in Condition 135.

[40 C.F.R. 60.592a, Subpart GGGa; and 60.482-10a(d), Subpart VVa]
[40 C.F.R. 63.640(s), 63.670 and 63.671, Subpart CC]

121.2. Except as provided in Conditions 121.5 through 121.7, each closed vent system shall be inspected according to the procedures and schedule specified in Conditions 121.2.a and 121.2.b.

a. If the vapor collection system or closed vent system is constructed of hard-piping, the Permittee shall comply with the requirements specified below:

(i) Conduct an initial inspection according to the procedures in Conditions 124.1.a and 124.1.b; and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

b. If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:

(i) Conduct an initial and annual inspections according to the procedures in Conditions 124.1.a and 124.1.b; and

[40 C.F.R. 60.482-10a(f)(1) – (2), Subpart VVa]

121.3. When a leak is detected, as indicated by an instrument reading greater than 500 ppmv above background or by visual inspections, the Permittee shall

a. repair the leak as soon as practicable, except as provided in Condition 121.4;

b. make a first attempt at repair no later than 5 calendar days after the leak is detected; and

c. complete the repair no later than 15 calendar days after the leak is detected.

[40 C.F.R. 60.482-10a(g)(1) – (2), Subpart VVa]

121.4. Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

[40 C.F.R. 60.482-10a(h), Subpart VVa]

121.5. If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of Conditions 121.2.a and 121.2.b.

[40 C.F.R. 60.482-10a(i), Subpart VVa]

121.6. Any parts of the closed vent system that are designated, as described in Condition 124.2.g(vi), as unsafe to inspect are exempt from the inspection requirements of Conditions 121.2.a and 121.2.b if they comply with the requirements specified below:

a. The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (f)(1)(i) or (f)(2) of this section; and

b. The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

[40 C.F.R. 60.482-10a(j)(1) – (2), Subpart VVa]

121.7. Any parts of the closed vent system that are designated, as described in Condition 124.2.f(ii), as difficult to inspect are exempt from the inspection requirements of Conditions 121.2.a and 121.2.b if they comply with the requirements specified below:

a. The Permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

b. The process unit within which the closed vent system is located becomes an affected facility through §§60.14 or 60.15, or the owner or operator designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

c. The Permittee has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

[40 C.F.R. 60.482-10a(k)(1) – (3), Subpart VVa]

121.8. Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

[40 C.F.R. 60.482-10a(m), Subpart VVa]

122. Delay of repair in §60.482-9a. The Permittee shall comply with the following provisions for delay of repair:

[40 C.F.R. 60.482-9a(a) – (f), Subpart VVa]

122.1. Delay of repair will be allowed under the following occurrences:

a. For equipment for which leaks have been detected, if repair within 15 days is technically infeasible without a process unit shutdown;

(i) Repair of this equipment shall occur before the end of the next process unit shutdown.

(ii) Monitoring to verify repair must occur within 15 days after startup of the process unit.

[40 C.F.R. 60.482-9a(a), Subpart VVa]

b. For equipment which is isolated from the process and which does not remain in VOC service.

[40 C.F.R. 60.482-9a(b), Subpart VVa]

c. For valves and connectors:

(i) if the Permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair; and

(ii) when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with Condition 121.

[40 C.F.R. 60.482-9a(c), Subpart VVa]

d. For pumps, if repair:

(i) requires the use of a dual mechanical seal system that includes a barrier fluid system; and

(ii) is completed as soon as practicable, but not later than 6 months after the leak was detected.

[40 C.F.R. 60.482-9a(d), Subpart VVa]

e. For a valve, delay of repair beyond a process unit shutdown will be allowed only if the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown and if:

(i) valve assembly replacement is necessary during the process unit shutdown;

(ii) valve assembly supplies have been depleted; and

(iii) valve assembly supplies had been sufficiently stocked before the supplies were depleted.

[40 C.F.R. 60.482-9a(e), Subpart VVa]

122.2. When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.

[40 C.F.R. 60.482-9a(f), Subpart VVa]

123. Alternative Standards for Valves. The Permittee may elect to comply with one of the alternative standards for valves described in Conditions 123.1 and 123.2.

[40 C.F.R. 60.483-1a(a) and 60.483-2a, Subpart VVa]

123.1. **Allowable percentage of valves leaking.** The Permittee shall not have an affected facility with a leak percentage greater than 2.0 percent, as determined in Condition 124.1.g(i). The Permittee shall comply with this alternative by meeting the following requirements:

a. Conduct a performance test initially upon designation, annually, and at other times requested by the Administrator and as follows:

(i) All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in Conditions 124.1.a and 124.1.b.

(ii) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

(iii) The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid service within the affected facility.

b. If a valve leak is detected, it shall be repaired in accordance with Condition 119.5.

[40 C.F.R. 60.483-1a(b)(2) & (3) and (c) – (d), Subpart VVa]

123.2. **Skip Period Leak Detection and Repair.** The Permittee shall comply with the alternative to skip period leak detection and repair, as follows:

[40 C.F.R. 60.483-2a(a) – (b), Subpart VVa]

a. The Permittee shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in Condition 119.

[40 C.F.R. 60.483-2a(b)(1), Subpart VVa]

b. The Permittee may elect to comply with one of the following alternative work practices:

(i) After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, the Permittee may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(ii) After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, the Permittee may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

[40 C.F.R. 60.483-2a(a)(1) and (b)(2) & (3), Subpart VVa]

c. If the percent of valves leaking is greater than 2.0, the Permittee shall comply with the requirements as described in Condition 119 but can again elect to use one of the alternatives described in Condition 123.2.b.

[40 C.F.R. 60.483-2a(b)(4), Subpart VVa]

d. Determine the percent of valves leaking as described in Condition 124.1.g(i).

[40 C.F.R. 60.483-2a(b)(5), Subpart VVa]

e. A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for a process unit following one of the alternative standards in Condition 123.2.b must be monitored in accordance with Condition 119.2.a or 119.2.b before the provisions of this alternative can be applied to that valve.

[40 C.F.R. 60.483-2a(b)(7), Subpart VVa]

124. NSPS Subpart GGGa/VVa MR&R. Except as provided in Condition 112.3, the Permittee shall comply with the monitoring, recordkeeping and reporting requirements under Conditions 124.1 through 124.3.

[18 AAC 50.040(a)(2)(UU) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) and (c)(6)]
[Minor Permit AQ0035MSS07, Condition 5.a, June 29, 2022]
[40 C.F.R. 60.592a, Subpart GGGa and 60.485a – 60.487a, Subpart VVa]

Monitoring

124.1. **Test Methods and Procedures.** The Permittee shall monitor compliance with the standards in Conditions 113 through 123 using the appropriate test methods and procedures described below:

[18 AAC 50.040(a)(2)(UU) and 50.326(j)(4)]
[40 C.F.R. 60.485a(a)(1), Subpart VVa and 60.592a(e), Subpart GGGa]
[40 C.F.R. 71.6(a)(3)(i) and (c)(6)]

a. Use Method 21 to determine the presence of leaking sources. Calibrate the instrument before use each day it is used by the procedures specified in Method 21 of 40 C.F.R. 60 Appendix A-7. Use the calibration gases specified under 40 C.F.R. 60.485a(b)(1).

b. Perform a calibration drift assessment, at a minimum, at the end of each monitoring day and in accordance with the procedures described in 40 C.F.R. 60.485a(b)(2).

[40 C.F.R 60.485a(b)(1) & (2), Subpart VVa]

c. Determine compliance with the no-detectable-emission standards in Conditions 114.6, 115.7, 116.1, 119.6, and 121.1, using Method 21 to determine the background level and as described in Condition 124.1.a. 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 60.485a(c)(1) & (2), Subpart VVa]

d. 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. 60.485a(d)(1) – (3), as appropriate.

[40 C.F.R 60.485a(d), Subpart VVa]

e. Demonstrate that a piece of equipment is in light liquid service by following the procedures described in 40 C.F.R. 60.485a(e)(1) – (3).

[40 C.F.R. 60.485a(e), Subpart VVa]

f. Samples used in conjunction with Conditions 124.1.d, 124.1.e, and 121.1 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 60.485a(f), Subpart VVa]

g. For valves in gas/vapor service and in light liquid service, determine compliance with the alternative standards in Conditions 123.1 or 123.2 as follows:

(i) Determine the percent of valves leaking using Equation 13:

Equation 13 $\%V_L = (V_L/V_T) * 100$

Where:

$\%V_L$	=	Percent leaking valves
V_L	=	Number of valves found leaking
V_T	=	The sum of the total number of valves monitored

(ii) 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.

(iii) Include in the number of valves found leaking the valves for which repair has been delayed.

(iv) Include in the number of valves leaking and the total number of valves monitored any new valve that is not monitored within 30 days of being placed in service for the monitoring period in which the valve is placed in service.

(v) If a process unit has been subdivided in accordance with Condition 119.4.a, the sum of valves found leaking during a monitoring period includes all subgroups.

(vi) Do not include in the total number of valves monitored a valve monitored to verify repair.

[40 C.F.R 60.485a(h), Subpart VVa]

Recordkeeping

124.2. The Permittee shall keep records, as follows:

[18 AAC 50.040(a)(2)(UU) and 50.326(j)(4)]
[40 C.F.R. 60.486a(a) – (j), 60.482-7a(c)(1)(ii), & 60.482-10a(l) Subpart VVa and 60.592a(e), Subpart GGGa]
[40 C.F.R. 71.6(a)(3)(ii) and (c)(6)]

a. The Permittee may comply with the recordkeeping requirements for the Kenai Refinery, KPL, and Nikiski Terminal for all equipment and process units in these facilities subject to the provisions of NSPS Subpart GGGa/VVa in one recordkeeping system if the system identifies each record by each facility.

[40 C.F.R. 60.486a(a)(2), Subpart VVa]

b. Record the following information for each monitoring event required under Conditions 114, 115, 119, 120, and 123.2:

(i) identification of operator, monitoring instrument, and equipment;

(ii) date of monitoring; and

(iii) instrument reading.

[40 C.F.R. 60.486a(a)(3), Subpart VVa]

c. When each leak is detected as specified under Conditions 114, 115, 119, 120, 123.2, the Permittee:

(i) shall attach to the leaking equipment a weatherproof and readily visible identification, marked with the equipment identification number;

(ii) may remove the following identification:

(A) on a valve after it has been monitored for 2 successive months as specified in Condition 119 and no leak has been detected during those 2 months; and

(B) on equipment, except on a valve or connector, may be removed after it has been repaired.

[40 C.F.R. 60.486a(b), Subpart VVa]

d. When each leak is detected as specified under Conditions 114, 115, 119, 120, 123.2, record the following information and keep records for 2 years in a readily accessible location:

(i) The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak.

(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) Maximum instrument reading measured by Method 21 of 40 C.F.R. 60 Appendix A-7 at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping.

(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 owner or operator (or designate) whose decision it was that 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.

[40 C.F.R. 60.486a(c), Subpart VVa]

e. The Permittee shall keep records of the following information pertaining to the design requirements for closed vent systems and control devices described in Condition 121 in a readily accessible location:

(i) detailed schematics, design specifications, and piping and instrumentation diagrams;

(ii) the dates and descriptions of any changes in the design specifications;

(iii) a description of the parameter or parameters monitored, as required in Condition 121.1, 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;

(iv) periods when the closed vent systems and control devices required in Conditions 114, 115, 116, and 117, are not operated as designed, including periods when a flare pilot light does not have a flame; and

(v) dates of startups and shutdowns of the closed vent systems and control devices required in Conditions 114, 115, 116, and 117.

[40 C.F.R. 60.486a(d), Subpart VVa]

f. The Permittee shall keep records of the following information pertaining to the closed vent systems and control devices in Condition 121:

(i) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(ii) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(iii) For each inspection during which a leak is detected, a record of the information specified in Condition 124.2.d.

(iv) For each inspection conducted in accordance with Conditions 124.1.a and 124.1.b during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(v) For each visual inspection conducted in accordance with Condition 121.2.a(ii)during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

[40 C.F.R. 60.482-10a(l)(1) – (5), Subpart VVa]

g. The following information pertaining to all equipment subject to the requirements in Conditions 113 through 122 shall be recorded in a log that is kept in a readily accessible location:

(i) a list of identification numbers for equipment subject to the requirements of Subpart VVa;

(ii) a list of identification numbers for equipment that are designated for no detectable emissions under the provisions of Conditions 114.6, 115.7, 116.1, and 119.6;

(A) The designation of equipment as subject to the requirements of Conditions 114.6, 115.7, and 119.6 shall be signed by the Permittee. Alternatively, the Permittee may establish a mechanism with the Department that satisfies this requirement.

(iii) a list of equipment identification numbers for pressure relief devices required to comply with Condition 116;

(iv) information on compliance demonstration with the requirements of Conditions 114.6, 115.7, 116.1, and 119.6;

(A) the dates of each compliance test;

(B) the background level measured during each compliance test; and

(C) the maximum instrument reading measured at the equipment during each compliance test.

(v) a list of identification numbers for equipment in vacuum service;

(vi) a list of identification numbers for equipment that the Permittee designates as operating in VOC service less than 300 hr/yr in accordance with Condition 113.4, 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;

(vii) the date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service;

(viii) records of the information specified in Conditions 124.2.g(viii)(A) through 124.2.g(viii)(F) for monitoring instrument calibrations conducted according to Sections 8.1.2 and 10 of Method 21 of 40 C.F.R. 60 Appendix A-7 and Conditions 124.1.a and 124.1.b.

(A) date of calibration and initials of operator performing the calibration;

(B) calibration gas cylinder identification, certification date, and certified concentration;

(C) instrument scale(s) used;

(D) a description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21 of 40 C.F.R. 60 Appendix A-7;

(E) results of each calibration drift assessment required by Condition 124.1.b (i.e., instrument reading for calibration at end of monitoring day and the calculated percent difference from the initial calibration value); and

(F) a description of the procedure used, if calibration gas was made by the Permittee.

(ix) records of each release from a pressure relief device subject to Condition 116; and

[40 C.F.R. 60.486a(e), Subpart VVa]

(x) a list of identification of valves assigned to each subgroup monitored within a process unit, in each month during the quarter that the valves are required to be monitored under Condition 119.4.a.

[40 C.F.R. 60.482-7a(c)(1)(ii), Subpart VVa]

h. The following information pertaining to all valves subject to the requirements of Conditions 119.7 and 119.8, and all pumps subject to the requirements of Condition 114.8, shall be recorded in a log that is kept in a readily accessible location:

(i) a list of identification numbers for valves, pumps, and connectors that are designated as unsafe-to-monitor, an explanation for each valve, pump, or connector stating why the valve, pump, or connector is unsafe-to-monitor, and the plan for monitoring each valve, pump, or connector; and

(ii) 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.

[40 C.F.R. 60.486a(f), Subpart VVa]

i. The following information shall be recorded for valves complying with Condition 123.2:

(i) a schedule of monitoring; and

(ii) the percent of valves found leaking during each monitoring period.

[40 C.F.R. 60.483-2a(b)(6) and 60.486a(g), Subpart VVa]

j. The following information shall be recorded in a log that is kept in a readily accessible location:

(i) design criterion required in Conditions 114.5.e and 115.3 and explanation of the design criterion; and

(ii) any changes to this criterion and the reasons for the changes.

[40 C.F.R. 60.486a(h), Subpart VVa]

k. The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in §60.480a(d):

(i) an analysis demonstrating the design capacity of the affected facility;

(ii) a statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol; and

(iii) an analysis demonstrating that equipment is not in VOC service.

[40 C.F.R. 60.486a(i), Subpart VVa]

l. Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

[40 C.F.R. 60.486a(j), Subpart VVa]

Reporting

124.3. The Permittee shall report as follows:

[18 AAC 50.040(a)(2)(UU) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(iii) and (c)(6)]

[40 C.F.R. 60.487a, Subpart VVa and 60.592a(e), Subpart GGGa]

a. Beginning six months after the initial startup date, submit to the EPA and the Department semiannual reports that include the following information, summarized from the information in Condition 124.2:

(i) Process unit identification (included in initial and subsequent semiannual reports);

(ii) Number of valves, pumps, and compressors subject to Conditions 119, 114, and 115, respectively (included only in initial semiannual report);

(iii) For each month during the semiannual reporting period:

(A) number of valves, pumps, and compressors for which leaks were detected as described in Condition 119.2 or 123.2 (for valves), Conditions 114.2, 114.5.d(i) or 114.5.d(ii), or 114.5.e(ii) (for pumps), and 115.4 (for compressors);

(B) number of valves, pumps, compressors, and connectors for which leaks were not repaired as required in Condition 119.5.a (for valves), Condition 114.4.a and 114.5.f (for pumps), and 115.5.a (for compressors); and

(C) the facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible;

(iv) Dates of process unit shutdowns which occurred within the semiannual reporting period; and

(v) Revisions to items reported in the initial semiannual report (see Conditions 124.3.a(i)a and 124.3.a(ii)) if changes have occurred since the initial report or subsequent revisions to the initial report.

[40 C.F.R. 60.487a(a) - (c), Subpart VVa]

b. If electing to comply with the provisions of Condition 123.1 or Condition 123.2, notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.

[40 C.F.R. 60.483-1a(b)(1), 60.483-2a(a)(2) & 60.487a(d), Subpart VVa]

c. Report the results of all performance tests in accordance with 40 C.F.R. 60.8 Subpart A. The provisions of §60.8(d) (Condition 59.4) do not apply to affected facilities subject to the provisions of Subpart VVa.

[40 C.F.R. 60.487a(e), Subpart VVa]

d. The requirements of Condition 124.3.a remain in force until and unless EPA, in delegating enforcement authority to a state under section 111(c) of the CAA, approves reporting requirements or an alternative means of compliance surveillance adopted by such state. In that event, affected sources within the state will be relieved of the obligation to comply with the requirements of

paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the state.

[40 C.F.R. 60.487a(f), Subpart VVa]

National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories, 40 C.F.R. Part 63

NESHAP Subpart A – 40 C.F.R. 63 General Provisions

125. The Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart A in accordance with the provisions for applicability of Subpart A in:

[18 AAC 50.040(c)(1) & (j) and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 63.1-63.16, Subpart A]

125.1. Table 6 to 40 C.F.R. 63 Subpart CC for EU IDs 42, 56 – 69, 71 – 79, 83 – 89, 94, 96, 99, 100, 102 – 108, 117, 120, 123, and 131 *[J-801, TK-10 through 14, TK-20, TK-22 through 25, TK-30 through 33, TK-35 through 37, TK-39 through 42, TK-45, TK-51, TK-60, TK-61 through 66, TK-97, Crude Unit, Hydrocracker, Hydrogen Unit, PRIP Unit, DIB Unit,Vacuum Unit, TK-104A, B, & C, TK-96, DDU, TK-67, and TK-723]*, listed in Table A.

[18 AAC 50.040(c)(10)]
[40 C.F.R. 63.642(c) & Table 6, Subpart CC]

125.2. Table 3 to 40 C.F.R. 63 Subpart GGGGG for site remediation-related activities at the stationary source.

[18 AAC 50.040(c)(24)]
[40 C.F.R. 63.7955 & Table 3, Subpart GGGGG]

125.3. Table 44 to 40 C.F.R. 63 Subpart UUU for EU IDs 25, 97, and 101 *[H-1105, J-801, Powerformer, and SRU]*.

[18 AAC 50.040(c)(19)]
[40 C.F.R. 63.1577 & Table 44, Subpart UUU]

125.4. Table 8 to 40 C.F.R. 63 Subpart ZZZZ for EU IDs 34 – 37, 39 – 41 *[P-605A, P-605B, P-708B, and P-719C,]*.

[18 AAC 50.040(c)(23)]
[40 C.F.R. 63.6665 & Table 8, Subpart ZZZZ]

125.5. Table 8 to 40 C.F.R. 63 Subpart DDDDD for EU IDs 1 – 12, 15 – 20, 22 – 24, 26 – 31, 115, 116, and 119 [H-101A, H401B, H-201, H-202, H-203, H-204, H-205, H-401, H-402, H-403N, H-404, H-609, H-701, H-702, H-704, H-801, H-802, H-1001, H-1102, H-1103, H-1104, H-1106, H-1201/1203, H-1202, H-1701, E-1400, E-1410, H-1601, H-1602, and H-1801].

[18 AAC 50.040(c)(37)]
[40 C.F.R. 63.6665 & Table 8, Subpart DDDDD]

NESHAP Subpart CC[57] – Petroleum Refineries

126. NESHAP Subpart CC Applicability and Requirements. The Permittee shall at all times comply with the standards and MR&R requirements specified in Conditions 127 through 139, applicable to petroleum refining process units[58] and to related emissions points[59] (as identified under Conditions 128 through 138) that are located at the Kenai Refinery plant, which is a HAPs major source as defined in CAA Section 112(a), and emit or have equipment containing or contacting one or more of the HAPs listed in Table 1 of 40 C.F.R. 63 Subpart CC.

126.1. The Permittee shall determine the predominant use of a flexible operation unit in accordance with §§63.640(b)(1)(i) and (ii)). If the predominant use is as a petroleum refining process unit then the flexible operation unit shall be subject to the provisions of 40 C.F.R. 63 Subpart CC. The determination of applicability of this subpart to petroleum refining process units that are designed and operated as flexible operation units shall be reported as specified in §63.655(h)(6)(i).

126.2. The Permittee shall comply with the requirements under 40 C.F.R. 63.640(i) through (m), as applicable, if an additional petroleum refining process unit or other process operations meeting the criteria under §§63.640(c)(1) through (9) are added or if any change is made to an existing petroleum refining process unit.

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & c(6)]
[40 C.F.R. 63.640(a) - (c) & (i) – (m) and 63.642(b), Subpart CC]

127. NESHAP Subpart CC GAPCP. At all times, the Permittee shall 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 the Permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results,

[57] The provisions of NESHAP Subpart CC listed in Conditions 126 through 139 are current as of February 4, 2020. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

[58] As defined by 40 C.F.R. § 63.641 Subpart CC: "*Petroleum refining process unit"* means a process unit used in an establishment primarily engaged in petroleum refining as defined in the Standard Industrial Classification code for petroleum refining (2911), and used primarily for the following: (1) producing transportation fuels, or lubricants; (2) separating petroleum; or (3) separating, cracking, reacting, or reforming intermediate petroleum streams. Examples of such units include, but are not limited to, petroleum-based solvent units, alkylation units, catalytic hydrotreating, catalytic hydrorefining, catalytic hydrocracking, catalytic reforming, catalytic cracking, crude distillation, lube oil processing, hydrogen production, isomerization, polymerization, thermal processes, and blending, sweetening, and treating processes. Petroleum refining process units also include sulfur plants.

[59] As defined by 40 C.F.R. § 63.641 Subpart CC: *"Emission point"* means an individual miscellaneous process vent, storage vessel, wastewater stream, equipment leak, decoking operation or heat exchange system associated with a petroleum refining process unit; an individual storage vessel or equipment leak associated with a bulk gasoline terminal or pipeline breakout station classified under Standard Industrial Classification code 2911; a gasoline loading rack classified under Standard Industrial Classification code 2911; or a marine tank vessel loading operation located at a petroleum refinery.

review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & c(6)]
[40 C.F.R. 63.642(n), Subpart CC]

128. Overlap of Subpart CC with Other Regulations. For Subpart CC-affected EUs that are also subject to other regulations as specified under this condition, the Permittee shall comply as follows:

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & c(6)]
[40 C.F.R. 63.640(n), Subpart CC]

128.1. **Overlap of Subpart CC with Other Regulations for Storage Vessels.** For Group 1 and Group 2 storage vessels that are also subject to the provisions of 40 C.F.R. 60 Subparts K, Ka, or Kb, the Permittee shall comply, as follows:

a. For EU IDs 87 through 89 *[TK-64 through 66]*, Group 1 storage vessels that are also subject to the provisions of 40 C.F.R. 60 Subpart K (see Condition 80), comply only with the provisions of this Subpart CC, as specified in Condition 130.

[40 C.F.R. 63.640(n)(5), Subpart CC]

b. For EU ID 58 *[TK-12]*, Group 2 storage vessels that is also subject to the provisions of 40 C.F.R. 60 Subpart K (see Condition 80) but not to the control requirements of 40 C.F.R. 60 Subpart K, comply only with the provisions of this Subpart CC, as specified in Condition 131.

[40 C.F.R. 63.640(n)(7), Subpart CC]

c. For EU ID 120 *[Tank 67]*, Group 1 storage vessel that is also subject to NSPS Subpart Kb, comply only with the provisions of NSPS Subpart Kb in Conditions 82 through 88 and the applicable requirements under 40 C.F.R. 63.640(n)(8) provided in Conditions 83.1, 84.5, and 88.3.

[40 C.F.R. 63.640(n)(2) & (n)(8), Subpart CC]

d. For EU IDs 59, 60, and 107 *[TK-13, TK-14, and TK-04c],* Group 2 storage vessels that are also subject to NSPS Subpart Ka, comply only with the provisions of NSPS Subpart Ka in Condition 81.

[40 C.F.R. 63.640(n)(6), Subpart CC]

128.2. **Overlap of Subpart CC with Other Regulations for Equipment Leaks.** For equipment leaks that are also subject to the provisions of 40 C.F.R. 60 Subpart GGGa, the Permittee shall comply only with the provisions specified in 40 C.F.R. 60 Subpart GGGa, as provided in Conditons 112 through 124, except that pressure relief devices in organic HAP service must only comply with the requirements in 40 C.F.R. 63.648(j) Subpart CC, as provided in Condition 134.

[40 C.F.R. 63.640(p)(2), Subpart CC]

128.3. **Overlap of Subpart CC with Other Regulations for Flares (EU ID 42).** On January 30, 2019, flares that are subject to the provisions of 40 CFR 60.18 or 63.11 and subject to this subpart are required to comply only with the provisions specified in this subpart.

[40 C.F.R. 63.640(s), Subpart CC

129. Storage Vessel Requirements. The Permittee shall comply with the applicable requirements for Group 1 and Group 2 storage vessels, as specified in Conditions 130 through 133 and as follows:

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & (c)(6)]
[40 C.F.R. 63.640(a), (c)(2), (e), and (n)(2), (5), (7) & (8) and 63.660, Subpart CC]
[40 C.F.R. 63.1060 - 63.1067, Subpart WW]

129.1. The Permittee may use good engineering judgment or test results to determine the stored liquid weight percent total organic HAP for purposes of group determination. Data, assumptions, and procedures used in the determination shall be documented.

[40 C.F.R. 63.660(a)(1), Subpart CC]

129.2. When the Permittee and the Administrator do not agree on whether the annual average weight percent organic HAP in the stored liquid is above or below 4 percent for a storage vessel at an existing source, an appropriate method (based on the type of liquid stored) as published by EPA or a consensus-based standards organization as listed in 40 C.F.R. 63.660(a)(2) shall be used.

[40 C.F.R. 63.660(a)(2), Subpart CC]
[40 C.F.R. 63.640(c)(2) & (n) and 63.660, Subpart CC]

130. Group 1 Storage Vessels.[60] Except as provided in Condition 128.1.c, for Group 1 storage vessels equipped with internal floating roof (IFR), EU IDs 56, 75, 76, 78, and 83 through 89 *[TK-10, TK-40, TK-41, TK-45, and TK-60 through 66]*) listed in Table A, storing liquid with a maximum true vapor pressure less than 76.6 kilopascals (11.1 pounds per square inch), the Permittee shall comply with the requirements in Subpart WW according to the following requirements:

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & (c)(6)]
[40 C.F.R. 63.640(c)(2), (e), (n)(2), (n)(5) & (n)(8) and 63.660, Subpart CC]

130.1. A floating roof storage vessel complying with the requirements of 40 C.F.R. 63 Subpart WW may comply with the control option specified in Condition 130.1.a and, if equipped with a ladder having at least one slotted leg, shall comply with one of the control options as described in Condition 130.1.b.

[60] Per 40 C.F.R. 63.641, *Group 1 storage vessel* means, as it applies to existing source: (1) prior to February 1, 2016 - a storage vessel that has a design capacity greater than or equal to 177 cubic meters (46,758.5 gallons) and stored-liquid maximum true vapor pressure greater than or equal to 10.4 kilopascals (1.51 psi) and stored-liquid annual average true vapor pressure greater than or equal to 8.3 kilopascals (1.20 psi) and annual average HAP liquid concentration greater than 4 percent by weight total organic HAP; and (2) on and after February 1, 2016 - a storage vessel that has a design capacity greater than or equal to 151 cubic meters (40,000 gallons) and stored-liquid maximum true vapor pressure greater than or equal to 5.2 kilopascals (0.75 pounds per square inch) and annual average HAP liquid concentration greater than 4 percent by weight total organic HAP.

a. In addition to the options presented in 40 C.F.R. 63.1063(a)(2)(viii)(A) and (B) *[control device configurations specified for a slotted guidepole]* and 63.1064 *[alternative means of emission limitation]* of Subpart WW, a floating roof storage vessel may comply with 40 C.F.R. 63.1063(a)(2)(viii) using a flexible enclosure device and either a gasketed or welded cap on the top of the guidepole.

b. Each opening through a floating roof for a ladder having at least one slotted leg shall be equipped with one of the configurations specified in Conditions 130.1.b(i) through 130.1.b(iii).

(i) A pole float in the slotted leg and pole wipers for both legs. The wiper or seal of the pole float must be at or above the height of the pole wiper.

(ii) A ladder sleeve and pole wipers for both legs of the ladder.

(iii) A flexible enclosure device and either a gasketed or welded cap on the top of the slotted leg.

[40 C.F.R. 63.660(b), (b)(1) & (b)(2)(i) – (iii), Subpart CC]

130.2. If the floating roof storage vessel does not meet the requirements of 40 C.F.R. 63.1063(a)(2)(i) through (a)(2)(viii) *[control device configurations specified* for d*eck fittings]* of Subpart WW as of June 30, 2014, these requirements do not apply until the next time the vessel is completely emptied and degassed, or January 30, 2026, whichever occurs first.

[40 C.F.R. 63.660(b), Subpart CC]

NESHAP Subpart WW Standards and Monitoring Requirements for Group 1 Storage Vessels

130.3. The Permittee shall operate and maintain the IFRs (with design requirements in accordance with 40 C.F.R. 63.1063(a)(1)(i) and (a)(2)) installed on EU IDs 56, 75, 76, 78, and 83 through 89, as follows:

[40 C.F.R. 63.660, Subpart CC]
[40 C.F.R. 63.1062(a)(1) and 63.1063(a)(1)(i), (a)(2) & (b), Subpart WW]

a. The floating roof shall float on the stored liquid surface at all times, except when the floating roof is supported by its leg supports or other support devices (e.g., hangers from the fixed roof).

b. When the storage vessel is storing liquid, but the liquid depth is insufficient to float the floating roof, the process of filling to the point of refloating the floating roof shall be continuous and shall be performed as soon as practical.

c. Each cover over an opening in the floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall be closed at all times, except when the cover must be open for access.

d. Each automatic bleeder vent (vacuum breaker vent) and rim space vent shall be closed at all times, except when required to be open to relieve excess pressure or vacuum, in accordance with the manufacturer's design.

e. Each unslotted guidepole cap shall be closed at all times except when gauging the liquid level or taking liquid samples.

[40 C.F.R. 63.1063(b)(1) – (5), Subpart WW]

130.4. For storage vessels previously subject to requirements in 40 C.F.R. 63.646, initial inspection requirements related to the initial filling of the storage vessel are not required. Failure to perform other inspections and monitoring required under this Condition 130 shall constitute a violation of the applicable standard of this subpart.

[40 C.F.R. 63.660(e), Subpart CC]

130.5. The Permittee shall inspect the IFRs, as follows:

a. At least once per year the IFR shall be inspected as specified in Condition 130.5.e; and

b. Each time the storage vessel is completely emptied and degassed, or every 10 years, whichever occurs first, the IFR shall be inspected as specified in Condition 130.5.d; or

c. Instead of the inspection frequency specified in Conditions 130.5.a and 130.5.b, IFRs with two rim seals may be inspected as specified in Condition 130.5.d each time the storage vessel is completely emptied and degassed, or every 5 years, whichever occurs first.

[40 C.F.R. 63.1063(c)(1)(i) & (ii), Subpart WW]

d. Conduct inspections of IFRs by visually inspecting the floating roof deck, deck fittings, and rim seals from within the storage vessel. The inspection may be performed entirely from the top side of the floating roof, as long as there is visual access to all deck components specified in 40 C.F.R. 63.1063(a)(2). Any of the conditions described in Conditions 130.5.d(i) through 130.5.d(v) constitutes inspection failure.

(i) Stored liquid on the floating roof.

(ii) Holes or tears in the primary or secondary seal (if one is present).

(iii) Floating roof deck, deck fittings, or rim seals that are not functioning as designed (as specified in 40 C.F.R. 63.1063(a)(1)(i) and (a)(2)).

(iv) Failure to comply with the operational requirements of Conditions 130.3.a through 130.3.e.

(v) Gaps of more than 0.32 centimeters (⅛ inch) between any deck fitting gasket, seal, or wiper (required by 40 C.F.R. 63.1063(a)(1)(i) and (a)(2)) and any surface that it is intended to seal.

[40 C.F.R. 63.1063(d)(1)(i) - (v), Subpart WW]

e. Conduct inspections of the tank-tops of IFRs by visually inspecting the floating roof deck, deck fittings, and rim seal through openings in the fixed roof. Any of the conditions described in Conditions 130.5.d(i) through 130.5.d(iv) constitutes inspection failure. Identification of holes or tears in the rim seal is required only for the seal that is visible from the top of the storage vessel.

[40 C.F.R. 63.1063(d)(2), Subpart WW]

f. Repair the conditions causing inspection failures under Condition 130.5.d as specified in Conditions 130.5.f(i) and 130.5.f(ii).

(i) If the inspection is performed while the storage vessel is not storing liquid, repairs shall be completed before the refilling of the storage vessel with liquid.

(ii) If the inspection is performed while the storage vessel is storing liquid, the Permittee shall:

(A) Complete the repairs or remove the vessel from service within 45 days; or

(B) If a repair cannot be completed and the vessel cannot be emptied within 45 days, the Permittee may use up to 2 extensions of up to 30 additional days each. Documentation of a decision to use an extension shall

(1) include a description of the failure,

(2) document that alternate storage capacity is unavailable, and

(3) specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be completely emptied as soon as practical.

[40 C.F.R. 63.1063(e)(1) & (2), Subpart WW]

131. Group 2 Storage Vessels.[61] Except as provided in Condition 128.1.d, for Group 2 storage vessels that are not subject to NSPS Subpart K or Ka, EU IDs 57, 61 – 74, 77, 79, 94, 105 – 106, 108, and 123 *[TK-11, TK-20, TK-22 through TK-25, TK-30 through TK-33, TK-35 through TK-37, TK-39 through TK-42, TK-51, TK-97, TK-04A, TK-04B, TK-96, and TK-723]* and EU ID 58 *[TK-12]* that is also subject to the provisions of 40 C.F.R. 60 Subpart K (see Condition 80) but not to the control requirements of 40 C.F.R. 60 Subpart K, the Permittee shall comply with the recordkeeping and reporting requirements as set out in Conditions 132 and 133.

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & (c)(6)]
[40 C.F.R. 63.640(n)(7), 63.642(e), and 63.655(e) & (g) - (i), Subpart CC]
[40 C.F.R. 63.119(a)(3) and 63.123(a), Subpart G]

[61] Per 40 C.F.R. 63.641, *Group 2 storage vessel* means a storage vessel that does not meet the definition of a Group 1 storage vessel.

Recordkeeping and Reporting Requirements

132. Storage Vessels Recordkeeping Requirements. The Permittee shall keep records for Group 1 and Group 2 storage vessels as follows:

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii) & (c)(6)]
[40 C.F.R. 63.642(e) and 63.655(i), Subpart CC]
[40 C.F.R. 63.1065, Subpart WW]

132.1. Except as otherwise specified in Conditions 132.2 through 132.4, keep records in accordance with the Subpart CC general recordkeeping requirements in Condition 139.1.

[40 C.F.R. 63.655(i) & (i)(6),Subpart CC]
[40 C.F.R. 63.1065, Subpart WW]

132.2. Records related to gaskets, slotted membranes, and sleeve seals are not required for storage vessels within existing sources.

[40 C.F.R. 63.655(i)(1)(i), Subpart CC]

132.3. For Group 1 storage vessels, EU IDs 56, 75, 76, 78, and 83 through 89, keep records, as follows:

[40 C.F.R. 63.655(i)(1)(v), Subpart CC]
[40 C.F.R. 63.1065(a) – (d), Subpart WW]

a. The Permittee shall keep the records of the following for as long as liquid is stored:

(i) dimensions of the storage vessel;

(ii) an analysis of the capacity of the storage vessel; and

(iii) an identification of the liquid stored.

[40 C.F.R. 63.1065(a), Subpart WW]

b. Keep the records required in Conditions 132.3.b(i) through 132.3.b(iii) for at least 5 years.

(i) *Inspection results.* Keep records of floating roof inspection results as specified in Conditions 132.3.b(i)(A)and 132.3.b(i)(B):

(A) If the floating roof passes inspection, keep a record of the following information:

(1) Identification of the storage vessel that was inspected.

(2) The date of the inspection.

(B) If the floating roof fails inspection, keep a record of the information specified in Condition 132.3.b(i)(A) and the following:

(1) A description of all inspection failures.

(2) A description of all repairs and the dates they were made.

(3) The date the storage vessel was removed from service, if applicable.

[40 C.F.R. 63.1065(b)(1), Subpart WW]

(ii) *Floating roof landings.* The Permittee shall keep a record of the following:

(A) the date when a floating roof is set on its legs or other support devices;

(B) the date when the roof was refloated; and

(C) indicate in the record whether the process of refloating was continuous.

[40 C.F.R. 63.1065(c), Subpart WW]

(iii) If electing to use an extension in accordance with Condition 130.5.f(ii)(B), keep the documentation required by Condition 130.5.f(ii)(B).

[40 C.F.R. 63.1065(d), Subpart WW]

132.4. For Group 2 storage vessels, EU IDs 57, 58, 61 – 74, 77, 79, 94, 105 – 106, 108, and 123, the Permittee shall compy as follows:

a. Keep records as required in Condition 132.3.a.

[40 C.F.R. 63.655(i)(1)(vi),Subpart CC]
[40 C.F.R. 63.1065(a), Subpart WW]

b. If a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent for existing sources, a record of any data, assumptions, and procedures used to make this determination.

[40 C.F.R. 63.655(i)(1)(iv) & (vi),Subpart CC]

133. Storage Vessels Reporting Requirements.[62] The Permittee shall comply with the following reporting requirements for storage vessels:

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]
[40 C.F.R. 63.655(e), (g), (h), and 63.660(h) Subpart CC]
[40 C.F.R. 63.1066(b), Subpart WW]

133.1. Except as otherwise specified in Conditions 133.2 through 133.4, report in accordance with the Subpart CC general reporting requirements under Condition 139.

[40 C.F.R. 63.655(i) & (i)(6),Subpart CC]

[62] Per 40 C.F.R. 63.660(f) Subpart CC, references in 40 C.F.R. 63.1066(a) Subpart WW to initial startup notification requirements do not apply.

[40 C.F.R. 63.1066, Subpart WW]

Periodic Reports

133.2. Report. the information specified in Conditions 133.2.a through 133.2.c, as applicable, in the periodic report required in Condition 139.7.

[40 C.F.R. 63.655(e)(2) and 63.655(g), Subpart CC]

a. *Notification of inspection.* To provide the Administrator the opportunity to have an observer present, the Permittee shall notify the Administrator at least 30 days before an inspection required by Condition 130.5.d.

(i) If an inspection is unplanned and the Permittee could not have known about the inspection 30 days in advance, then the Permittee shall notify the Administrator at least 7 days before the inspection.

(A) Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned.

(B) Alternatively, the notification including the written documentation may be made in writing and sent so that it is received by the Administrator at least 7 days before the inspection.

(C) If a delegated State or local agency is notified, the Permittee is not required to notify the Administrator. A delegated State or local agency may waive the requirement for notification of inspections.

b. *Inspection results.* The Permittee shall submit a copy of the inspection record (required in Condition 132.3.b(i)(B)) when inspection failures occur.

c. *Requests for extensions.* An owner or operator who elects to use an extension in accordance with Condition 130.5.f(ii) shall submit the documentation required under Condition 130.5.f(ii)(B).

[40 C.F.R. 63.1066(b)(1), (2), & (4), Subpart WW]
[40 C.F.R. 63.655(g)(1) & (g)(2)(ii), Subpart CC]
[40 C.F.R. 63.660(h), Subpart CC]

133.3. For Group 1 storage vessels in Condition 130 complying with 40 C.F.R. 63.660 by using a fixed roof and an internal floating roof, include with the Periodic Reports the following specific information:

a. The results of each inspection conducted in accordance with Conditions 130.5.a through 130.5.e in which a failure is detected in the control equipment.

b. For vessels for which inspections are required under Conditions 130.5.a through 130.5.e, the specifications and requirements listed in Conditions 133.3.b(i) through 133.3.b(iii):

(i) A failure is defined in Condition 130.5.d.

(ii) Each Periodic Report shall include a copy of the inspection record required by Condition 132.3.b(i)(B) when a failure occurs.

(iii) If electing to use an extension in accordance with Condition 130.5.f(ii)(B), the Permittee shall, in the next Periodic Report, submit the documentation required by Condition 130.5.f(ii)(B).

[40 C.F.R. 63.655(g)(1) & (g)(2)(ii), Subpart CC]

Other Reports

133.4. Submit other reports as specified in NESHAP 40 C.F.R. 63 Subpart A and notifications of inspections, as follows:

[40 C.F.R. 63.655(e)(3) and 63.655(h), Subpart CC]

a. In order to afford the Administrator the opportunity to have an observer present, the Permittee shall notify the Administrator of the refilling of each Group 1 storage vessel that has been emptied and degassed, as follows:

(i) Except as provided in Conditions 133.4.a(ii) and 133.4.a(iii), notify the Administrator in writing at least 30 calendar days prior to filling or refilling of each storage vessel with organic HAP's to afford the Administrator the opportunity to inspect the storage vessel prior to refilling.

(ii) Except as provided in Condition 133.4.a(iii), if the internal inspection required by Condition 130.5.d is not planned and the Permittee could not have known about the inspection 30 calendar days in advance of refilling the vessel with organic HAP, the Permittee shall notify the Administrator at least 7 calendar days prior to refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. This notification, including the written documentation, may also be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to the refilling.

(iii) The Department can waive the notification requirements of Condition 133.4.a(i) and/or Condition 133.4.a(ii) for all or some storage vessels at petroleum refineries subject to this subpart. The Department may also grant permission to refill storage vessels sooner than 30 days after submitting the notification required by Condition 133.4.a(i), or sooner than 7 days after submitting the notification required by Condition 133.4.a(ii) for all storage vessels, or for individual storage vessels on a case-by-case basis.

[40 C.F.R. 63.655(h)(2)(i)(A) - (C), Subpart CC]

134. Equipment Leaks Requirements. As specified in Condition 128.2, for pressure relief devices in organic HAP service, the Permittee must comply with the following:

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & c(6)]
[40 C.F.R. 63.640(c)(4) & (p)(2), 63.648(j) and 63.655(d), (e), (g) & (i), Subpart CC]

Work and Management Practices and Monitoring Requirements

134.1. Except as specified in Condition 134.6, the Permittee shall comply with the requirements specified in Conditions 134.3 and 134.4 for pressure relief devices, such as relief valves or rupture disks, in organic HAP gas or vapor service instead of the pressure relief device requirements of 40 C.F.R. 60.482-4a Subpart GGGa (Condition 116).

134.2. Except as specified in Conditions 134.6 and 134.7, also comply with the requirements specified in Condition 134.5 for all pressure relief devices in organic HAP service.

[40 C.F.R. 63.648(j), Subpart CC]

134.3. *Operating requirements.* Except during a pressure release, operate each pressure relief device in organic HAP gas or vapor service with an instrument reading of less than 500 ppm above background as detected by Method 21 of 40 C.F.R. 60, Appendix A-7.

[40 C.F.R. 63.648(j)(1), Subpart CC]

134.4. *Pressure release requirements.* For pressure relief devices in organic HAP gas or vapor service, comply with the applicable requirements in 134.4.a through 134.4.c following a pressure release.

a. If the pressure relief device does not consist of or include a rupture disk, conduct instrument monitoring, as specified in 40 C.F.R. 60.485a(c) Subpart GGGa (Condition 124.1.c), no later than 5 calendar days after the pressure relief device returns to organic HAP gas or vapor service following a pressure release to verify that the pressure relief device is operating with an instrument reading of less than 500 ppm.

b. If the pressure relief device includes a rupture disk, either comply with the requirements in Condition 134.4.a (not replacing the rupture disk) or install a replacement disk as soon as practicable after a pressure release, but no later than 5 calendar days after the pressure release. Conduct instrument monitoring, as specified in Condition 124.1.c no later than 5 calendar days after the pressure relief device returns to organic HAP gas or vapor service following a pressure release to verify that the pressure relief device is operating with an instrument reading of less than 500 ppm.

c. If the pressure relief device consists only of a rupture disk, install a replacement disk as soon as practicable after a pressure release, but no later than 5 calendar days after the pressure release. The Permittee

(i) may not initiate startup of the equipment served by the rupture disk until the rupture disc is replaced.

(ii) must conduct instrument monitoring, as specified in Condition 124.1.c no later than 5 calendar days after the pressure relief device returns to organic HAP gas or vapor service following a pressure release to verify that the pressure relief device is operating with an instrument reading of less than 500 ppm.

[40 C.F.R. 63.648(j)(2), Subpart CC]

134.5. *Pressure release management.* Except as specified in Conditions 134.6 and 134.7, the Permittee shall comply with the following requirements for all pressure relief devices in organic HAP service no later than January 30, 2019[63]:

a. Equip each affected pressure relief device with a device(s) or use a monitoring system that is capable of:

(i) Identifying the pressure release;

(ii) Recording the time and duration of each pressure release; and

(iii) Notifying operators immediately that a pressure release is occurring, as described in 40 C.F.R. 63.648(j)(3)(i)(C).

[40 C.F.R. 63.640(h), 63.648(j)(3)(i), and Table 11, Subpart CC]

b. Apply at least three redundant prevention measures to each affected pressure relief device and document these measures. Examples of prevention measures are provided in 40 C.F.R. 63.648(j)(3)(ii)(A) through E.

[40 C.F.R. 63.648(j)(3)(ii), Subpart CC]

c. If any affected pressure relief device releases to atmosphere as a result of a pressure release event, perform root cause analysis and corrective action analysis according to the requirement in Condition 134.8 and implement corrective actions according to the requirements in Condition 134.9. Calculate the quantity of organic HAP released during each pressure release event and report this quantity as required in Condition 134.10.f(iii). Calculations may be based on data from the pressure relief device monitoring alone or in combination with process parameter monitoring data and process knowledge.

[40 C.F.R. 63.648(j)(3)(iii), Subpart CC]

d. Determine the total number of release events occurred during the calendar year for each affected pressure relief device separately, and the total number of release events for each pressure relief device for which the root cause analysis concluded that the root cause was a force majeure event, as defined in this subpart.

[40 C.F.R. 63.648(j)(3)(iv), Subpart CC]

[63] The Kenai Refinery was in compliance with the applicable requirements on or before January 11, 2019.

e. Except for pressure relief devices described in Conditions 134.6 and 134.7,, the following release events from an affected pressure relief device are a violation of the pressure release management work practice standards:

(i) Any release event for which the root cause of the event was determined to be operator error or poor maintenance.

(ii) A second release event not including force majeure events from a single pressure relief device in a 3 calendar year period for the same root cause for the same equipment.

(iii) A third release event not including force majeure events from a single pressure relief device in a 3 calendar year period for any reason.

[40 C.F.R. 63.648(j)(3)(v), Subpart CC]

134.6. *Pressure relief devices routed to a control device.* The Permittee shall only comply with the following:

a. If all releases and potential leaks from a pressure relief device are routed through a closed vent system to a control device, back into the process or to the fuel gas system, the Permittee is not required to comply with Conditions 134.3, 134.4 or 134.5.

b. If a pilot-operated pressure relief device is used and the primary release valve is routed through a closed vent system to a control device, back into the process or to the fuel gas system, the Permittee shall comply only with Conditions 134.3 and 134.4 for the pilot discharge vent and not with Condition 134.5 for the pilot-operated pressure relief device.

c. If a balanced bellows pressure relief device is used and the primary release valve is routed through a closed vent system to a control device, back into the process or to the fuel gas system, the owner or operator is required to comply only with Conditions 134.3 and 134.4 for the bonnet vent and is not required to comply with Condition 134.5 for the balanced bellows pressure relief device.

d. Both the closed vent system and control device (if applicable) referenced in Conditions 134.6.a through 134.6.c must meet the requirements of §63.644. When complying with this Condition 134.6, all references to “Group 1 miscellaneous process vent” in §63.644 mean “pressure relief device.”

e. If a pressure relief device complying with this Condition 134.6 is routed to the fuel gas system, then on and after January 30, 2019, any flares receiving gas from that fuel gas system must be in compliance with 40 C.F.R. 63.670 (incorporated in Conditions 41 through 45.4).

[40 C.F.R. 63.648(j)(4), Subpart CC]

134.7. *Pressure relief devices exempted from pressure release management requirements.* The Permittee is exempt from the pressure release management requirements in Condition 134.5 for the following types of pressure relief devices:

a. Pressure relief devices in heavy liquid service, as defined in §63.641;

b. Pressure relief devices that only release material that is liquid at standard conditions (1 atmosphere and 68 degrees Fahrenheit) and that are hard-piped to a controlled drain system (i.e., a drain system meeting the requirements for Group 1 wastewater streams in §63.647(a)) or piped back to the process or pipeline;

c. Thermal expansion relief valves;

d. Pressure relief devices designed with a set relief pressure of less than 2.5 psig;

e. Pressure relief devices that do not have the potential to emit 72 lbs/day or more of VOC based on the valve diameter, the set release pressure, and the equipment contents; and

f. Pressure relief devices on mobile equipment.

[40 C.F.R. 63.648(j)(5), Subpart CC]

134.8. *Root cause analysis and corrective action analysis.* The Permittee shall complete a root cause analysis and corrective action analysis as soon as possible, but no later than 45 days after a release event. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are as follows:

a. You may conduct a single root cause analysis and corrective action analysis for a single emergency event that causes two or more pressure relief devices installed on the same equipment to release.

b. You may conduct a single root cause analysis and corrective action analysis for a single emergency event that causes two or more pressure relief devices to release, regardless of the equipment served, if the root cause is reasonably expected to be a force majeure event, as defined in this subpart.

c. Except as provided in Conditions 134.8.a and 134.8.b, if more than one pressure relief device has a release during the same time period, an initial root cause analysis shall be conducted separately for each pressure relief device that had a release. If the initial root cause analysis indicates that the release events have the same root cause(s), the initially separate root cause analyses may be recorded as a single root cause analysis and a single corrective action analysis may be conducted.

[40 C.F.R. 63.648(j)(6), Subpart CC]

134.9. *Corrective action implementation.* If required to conduct a root cause analysis and corrective action analysis as specified in §63.648(j)(3)(iii) and Condition 134.8, the Permittee shall implement the corrective action(s) identified in the corrective action analysis in accordance with the following:

a. All corrective action(s) must be implemented within 45 days of the event for which the root cause and corrective action analyses were required or as soon thereafter as practicable. If the Permittee concludes that no corrective action

should be implemented, the Permittee shall record and explain the basis for that conclusion no later than 45 days following the event.

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

c. No later than 45 days following the event for which a root cause and corrective action analyses were required, the Permittee 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.

[40 C.F.R. 63.648(j)(7), Subpart CC]

Recordkeeping and Reporting Requirements

134.10. The Permittee shall comply with the following recordkeeping and reporting requirements for pressure relief devices:

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii) & (iii) and 71.6(c)(6)]
[40 C.F.R. 63.655(d), (e), & (g) - (i) Subpart CC]

a. For each pressure relief device subject to the pressure release management work practice standards in Condition 134.5, the Permittee shall keep the following records:

(i) Records of the prevention measures implemented as required in Condition 134.5.b, if applicable.

(ii) Records of the number of releases during each calendar year and the number of those releases for which the root cause was determined to be a force majeure event. Keep these records for the current calendar year and the past five calendar years.

(iii) For each release to the atmosphere, the Permittee shall keep the following records:

(A) The start and end time and date of each pressure release to the atmosphere.

(B) Records of any data, assumptions, and calculations used to estimate of the mass quantity of each organic HAP released during the event.

(C) Records of the root cause analysis and corrective action analysis conducted as required in Condition 134.5.c, including:

(1) an identification of the affected facility;

(2) the date and duration of the event; and

(3) a statement noting whether the event 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 134.9.a.

(D) For any corrective action analysis for which implementation of corrective actions are required in Condition 134.9:

(1) a description of the corrective action(s) completed within the first 45 days following the discharge; and,

(2) for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

[40 C.F.R. 63.655(i)(11)(i) – (iii), Subpart CC]

b. For each pilot-operated pressure relief device subject to the requirements at Condition 134.6.b, the Permittee shall keep the following records:

(i) General or release-specific records for estimating the quantity of VOC released from the pilot vent during a release event; and

(ii) records of calculations used to determine the quantity of specific HAP released for any event or series of events in which 72 or more pounds of VOC are released in a day.

[40 C.F.R. 63.655(i)(11)(iv), Subpart CC]

c. Keep records and report in accordance with Conditions 124.2 and 124.3, except as specified in Condition 134.10.c(i).

(i) The signature of the owner or operator (or designate) whose decision it was that a repair could not be effected without a process shutdown is not required to be recorded. Instead, the name of the person whose decision it was that a repair could not be effected without a process shutdown shall be recorded and retained for 2 years.

[40 C.F.R. 63.655(d)(1), Subpart CC]
[40 C.F.R. 60.486a and 60.482-7a, Subpart VVa]

d. Submit the initial semiannual report required by Condition 124.3.a within 150 days of the compliance date specified in Table 11 to Subpart CC.

[40 C.F.R. 63.640(h), 63.655(d)(2) and Table 11, Subpart CC]

e. Identify, either by list or location (area or refining process unit), equipment in organic HAP service less than 300 hours per year within refining process units subject to this subpart.

[40 C.F.R. 63.655(d)(5), Subpart CC]

f. Include in the Periodic Reports required under Condition 139.7 the following information:

(i) For pressure relief devices in organic HAP gas or vapor service, pursuant to Condition 134.3, report any instrument reading of 500 ppm or greater.

(ii) For pressure relief devices in organic HAP gas or vapor service subject to Condition 134.4, report confirmation that any monitoring required to be done during the reporting period to show compliance was conducted.

(iii) For pilot-operated pressure relief devices in organic HAP service, report each pressure release to the atmosphere through the pilot vent that equals or exceeds 72 pounds of VOC per day, including duration of the pressure release through the pilot vent and estimate of the mass quantity of each organic HAP released.

(iv) For pressure relief devices in organic HAP service subject to Condition 134.5, report each pressure release to the atmosphere, including duration of the pressure release and estimate of the mass quantity of each organic HAP released, and the results of any root cause analysis and corrective action analysis completed during the reporting period, including the corrective actions implemented during the reporting period and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

[40 C.F.R. 63.655(e)(2) & (g)(10)(i) – (iv), Subpart CC]

135. Flares (EU ID 42) Used as Control Device. On and after January 30, 2019, for EU ID 42 *[J-801],* flare receiving gas from the fuel gas system, the Permittee shall comply with the applicable requirements under 40 C.F.R. 63.670 and 63.671 Subpart CC incorporated with the CD requirements under Conditions 28 through 33, 41 through 50, and Conditions 135.1 and 135.2 below.

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & c(6)]
[40 C.F.R. 63.640(d)(5), 63.640(s), 63.655(e), (g) & (i), 63.670 and 63.671, Subpart CC]
[Minor Permit No. AQ0035MSS07, Conditions 8 – 13 & 22 – 31, June 29, 2022]

135.1. **Emergency Flaring Provisions.** If EU ID 42 has the potential to operate above its smokeless capacity under any circumstance, the Permittee shall comply with the following:

a. No later than January 30, 2019, the Permittee shall develop and implement a flare management plan to minimize flaring during periods of startup, shutdown, or emergency releases, and comply with the plan as submitted.[64]

b. The flare management plan must include the information described in Conditions 135.1.a through 135.1.h and must be submitted to the Administrator as described in 40 C.F.R. 63.670(o)(2)(i) through (iii).

[64] On January 29, 2019, the Permittee submitted to EPA the Flare Management Plan required under 40 C.F.R. 63.670(o)(2) Subpar CC.

c. The Permittee shall update the plan periodically to account for changes in the operation of the flare, such as new connections to the flare or the installation of a flare gas recovery system, but the plan need be re-submitted to the Administrator only if the Permittee alters the design smokeless capacity of the flare. The Permittee must comply with the updated plan as submitted.

d. Conduct a root cause analysis and a corrective action analysis for each flow event that contains regulated material and that meets either the criteria in Condition 135.1.d(i) or 135.1.d(ii):

(i) The vent gas flow rate exceeds the smokeless capacity of the flare based on a 15-minute block average and visible emissions are present from the flare for more than 5 minutes during any 2 consecutive hours during the release event.

(ii) The vent gas flow rate exceeds the smokeless capacity of the flare and the 15-minute block average flare tip velocity exceeds the maximum flare tip velocity determined using the methods in Condition 45.2.

e. Complete a root cause analysis as soon as possible, but no later than 45 days after a flare flow event meeting the criteria in Conditions 135.1.d(i) or 135.1.d(ii). Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in 40 C.F.R. 63.670(o)(4)(i) through (v).

f. Implement the corrective action(s) identified in the corrective action analysis in accordance with the applicable requirements in 40 C.F.R. 63.670(o)(5)(i) through (iii) within 45 days of the event for which the root cause and corrective action analyses were required or as soon thereafter as practicable.

(i) If the Permittee concludes that no corrective action should be implemented, the Permittee shall record and explain the basis for that conclusion no later than 45 days following the event.

g. Determine the total number of events for which a root cause and corrective action analyses was required during the calendar year for EU ID 42 separately for events meeting each of the criteria in Condition 140.1.d(i) or 140.1.d(ii). For the purpose of this requirement, a single root cause analysis conducted for an event that met both of the criteria in Condition 135.1.d(i) and 135.1.d(ii) would be counted as an event under each of the separate criteria counts for that flare. Additionally, if a single root cause analysis was conducted for an event that caused multiple flares to meet the criteria in Condition 135.1.d(i) or 135.1.d(ii), that event would count as an event for EU ID 42 for each criteria in Condition 135.1.d that was met during that event. The Permittee shall also determine the total number of events for which a root cause and correct action analyses was required and the analyses concluded that the root cause was a force majeure event, as defined in this subpart.

h. The following events would be a violation of this emergency flaring work practice standard:

(i) Any flow event for which a root cause analysis was required and the root cause was determined to be operator error or poor maintenance.

(ii) Two visible emissions exceedance events meeting the criteria in Condition 135.1.d(i) that were not caused by a force majeure event from a single flare in a 3 calendar-year period for the same root cause for the same equipment.

(iii) Two flare tip velocity exceedance events meeting the criteria in Condition 135.1.d(ii) that were not caused by a force majeure event from a single flare in a 3 calendar-year period for the same root cause for the same equipment.

(iv) Three visible emissions exceedance events meeting the criteria in Condition 135.1.d(i) that were not caused by a force majeure event from a single flare in a 3 calendar year period for any reason.

(v) Three flare tip velocity exceedance events meeting the criteria in Condition 135.1.d(ii) that were not caused by a force majeure event from a single flare in a 3 calendar-year period for any reason.

[40 C.F.R. 63.670(o)(1) – (o)(7), Subpart CC]

Recordkeeping and Reporting Requirements

135.2. The Permittee shall comply with the following recordkeeping and reporting requirements for the flare, EU ID 42, used as control device:

a. Keep the records listed under Conditions 50.4 and 135.2.a(i) through 135.2.a(ii) up-to-date, readily accessible and for at least 5 years as required in Condition 139.1, except as otherwise specified in Condition 50.4.

[40 C.F.R. 63.655(i)(9)(i) - (xii), Subpart CC]

(i) Records of the root cause analysis and corrective action analysis conducted as required in Condition 135.1.d, including:

(A) an identification of the affected facility,

(B) the date and duration of the event,

(C) a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis, and

(D) either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under Condition 135.1.f(i).

(ii) For any corrective action analysis for which implementation of corrective actions are required in Condition 135.1.f,

(A) a description of the corrective action(s) completed within the first 45 days following the discharge, and

(B) for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

[40 C.F.R. 63.655(i)(9)(xi) & (xii), Subpart CC]

b. Include in the Periodic Reports required under Condition 139.7 when any of the information specified in Conditions 135.2.b(i) through 135.2.b(iv)(D) is collected:

(i) Records as specified in Condition 50.4.a for each 15-minute block during which there was at least one minute when regulated material is routed to a flare and no pilot flame is present.

(ii) Visible emission records as specified in Condition 50.4.c(ii) for each period of 2 consecutive hours during which visible emissions exceeded a total of 5 minutes.

(iii) The 15-minute block periods for which the applicable operating limits specified in Conditions 44.1, 44.2, 45.1, and 45.2 are not met. Indicate the date and time for the period, the net heating value operating parameter(s) determined following the methods in Conditions 44.1.a, 44.1.b, 44.2.a, 44.2.b, 45.3, and 45.4 as applicable.

(iv) For flaring events meeting the criteria in Condition 135.1.d:

(A) The start and stop time and date of the flaring event.

(B) The length of time for which emissions were visible from the flare during the event.

(C) The periods of time that the flare tip velocity exceeds the maximum flare tip velocity determined using the methods in Condition 45.2 and the maximum 15-minute block average flare tip velocity recorded during the event.

(D) Results of the root cause and corrective actions analysis completed (in accordance with Conditions 135.1.d and 135.1.e) during the reporting period, including the corrective actions implemented during the reporting period and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

[40 C.F.R. 63.655(e)(2) & (g)(11) and 63.670(q), Subpart CC]

136. Miscellaneous Process Vent Requirements. The Permittee shall comply with the Conditions 136.1 through 136.5, as follows:

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & c(6)]

[40 C.F.R. 63.640(c)(1), 63.643– 63.644, and 63.655(e) & (g) - (i), Subpart CC]

Emission Standards

136.1. For Group 1 miscellaneous process vent,[65] the Permittee shall reduce emissions of organic HAPs using a flare that meets the requirements of Condition 135 or, if applicable, Condition 136.2.

a. For miscellaneous process vent that meets the conditions in Condition 136.2, the Permittee is only required to comply with the requirements of Conditions 136.2 and 136.5.b through 136.5.d for that vent.

[40 C.F.R. 63.643(a) & (a)(1), Subpart CC]

Work and Management Practice Standards

136.2. The Permittee may designate a process vent as a maintenance vent if the vent is only used as a result of startup, shutdown, maintenance, or inspection of equipment where equipment is emptied, depressurized, degassed or placed into service.

a. The Permittee does not need to designate a maintenance vent as a Group 1 or Group 2 miscellaneous process vent nor identify maintenance vents in a NOCS report.

b. The Permittee must comply with the applicable requirements in Conditions 136.2.b(i) through136.2.b(iii) for each maintenance vent according to the compliance dates specified in Table 11 of this Subpart CC, unless an extension is requested in accordance with the provisions in 40 C.F.R. 63.6(i) Subpart A.

[40 C.F.R. 63.643(c), Subpart CC]

(i) Prior to venting to the atmosphere, process liquids are removed from the equipment as much as practical and the equipment is depressured to a to a control device meeting requirements in 40 C.F.R. 63.643(a)(1) or (2), a fuel gas system, or back to the process until one of the following conditions, as applicable, is met.

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[65] *Group 1 miscellaneous process vent* means a miscellaneous process vent for which the total organic HAP concentration is greater than or equal to 20 parts per million by volume, and the total volatile organic compound emissions are greater than or equal to 33 kilograms per day for existing sources and 6.8 kilograms per day for new sources at the outlet of the final recovery device (if any) and prior to any control device and prior to discharge to the atmosphere.

Miscellaneous process vent means a gas stream containing greater than 20 parts per million by volume organic HAP that is continuously or periodically discharged from a petroleum refining process unit meeting the criteria specified in §63.640(a). *Miscellaneous process vents* include gas streams that are discharged directly to the atmosphere, gas streams that are routed to a control device prior to discharge to the atmosphere, or gas streams that are diverted through a product recovery device prior to control or discharge to the atmosphere. *Miscellaneous process vents* include vent streams from: Caustic wash accumulators, distillation tower condensers/accumulators, flash/knockout drums, reactor vessels, scrubber overheads, stripper overheads, vacuum pumps, steam ejectors, hot wells, high point bleeds, wash tower overheads, water wash accumulators, blowdown condensers/accumulators, and delayed coker vents.
[Ref. 40 C.F.R. 63.641, Subpart CC]

(A) The vapor in the equipment served by the maintenance vent has a lower explosive limit (LEL) of less than 10 percent.

(B) If there is no ability to measure the LEL of the vapor in the equipment based on the design of the equipment, the pressure in the equipment served by the maintenance vent is reduced to 5 pounds per square inch gauge (psig) or less. Upon opening the maintenance vent, active purging of the equipment cannot be used until the LEL of the vapors in the maintenance vent (or inside the equipment if the maintenance is a hatch or similar type of opening) is less than 10 percent.

(C) The equipment served by the maintenance vent contains less than 72 pounds of total volatile organic compounds (VOC).

(D) If the maintenance vent is associated with equipment containing pyrophoric catalyst (e.g., hydrotreaters and hydrocrackers) and a pure hydrogen supply is not available at the equipment at the time of the startup, shutdown, maintenance, or inspection activity, the LEL of the vapor in the equipment must be less than 20 percent, except for one event per year not to exceed 35 percent.

(E) If, after applying best practices to isolate and purge equipment served by a maintenance vent, none of the applicable criterion in Conditions 136.2.b(i)(A) through 136.2.b(i)(D) can be met prior to installing or removing a blind flange or similar equipment blind, the pressure in the equipment served by the maintenance vent is reduced to 2 psig or less. Active purging of the equipment may be used provided the equipment pressure at the location where purge gas is introduced remains at 2 psig or less.

[40 C.F.R. 63.643(c)(1)(i) –(v), Subpart CC]

(ii) Except for maintenance vents complying with the alternative in Condition 136.2.b(i)(C), the Permittee must determine the LEL or, if applicable, equipment pressure using process instrumentation or portable measurement devices and follow procedures for calibration and maintenance according to manufacturer's specifications.

[40 C.F.R. 63.643(c)(2), Subpart CC]

(iii) For maintenance vents complying with the alternative in Condition 136.2.b(i)(C), the Permittee shall determine mass of VOC in the equipment served by the maintenance vent based on the equipment size and contents after considering any contents drained or purged from the equipment. Equipment size may be determined from equipment design specifications. Equipment contents may be determined using process knowledge.

[40 C.F.R. 63.643(c)(3), Subpart CC]

136.3. After February 1, 2016 and prior to the date of compliance with the maintenance vent provisions in Condition 136.2, the Permittee must comply with the requirements in Condition 127 for each maintenance venting event and maintain records necessary to demonstrate compliance with the requirements in Condition 127 including, if appropriate, records of existing standard site procedures used to deinventory equipment for safety purposes.

[40 C.F.R. 63.643(d), Subpart CC]

Monitoring Requirements

136.4. The Permittee shall monitor compliance with the emission standards under Condition 136.1, as follows:

[40 C.F.R. 63.644(a) – (e), Subpart CC]

a. Except as provided in Condition 136.4.c, if a combustion device is used to comply with the requirements in Condition 136.1, the Permittee shall install the monitoring equipment specified in Condition 136.4.a(i).

(i) Where a flare is used, a device (including but not limited to a thermocouple, an ultraviolet beam sensor, or an infrared sensor) capable of continuously detecting the presence of a pilot flame is required, and the requirements of §63.670 (Condition 135) shall be met.

[40 C.F.R. 63.644(a) & (a)(2), Subpart CC]

b. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately and, except for CPMS installed for pilot flame monitoring, must meet the applicable minimum accuracy, calibration and quality control requirements specified in Table 13 of this Subpart CC.

[40 C.F.R. 63.644(a), Subpart CC]

c. The Permittee may request approval to monitor parameters other than those listed in Condition 136.4.a(i). The request shall be submitted according to the procedures specified in Condition 139.10.a. Approval shall be requested if the Permittee:

(i) Uses a control device other than an incinerator, boiler, process heater, or flare; or

(ii) Uses one of the control devices listed in Condition 136.4.a(i), but seeks to monitor a parameter other than those specified in Condition 136.4.a(i).

[40 C.F.R. 63.644(b), Subpart CC]

d. For a Group 1 miscellaneous process vent using a vent system that contains bypass lines that could divert a vent stream away from the control device used to comply with Condition 136.4.a either directly to the atmosphere or to a

control device that does not comply with the requirements in Condition 136.1 shall comply with either Condition 136.4.d(i), 136.4.d(ii), or 136.4.d(iii).

(i) Install, calibrate and maintain a flow indicator that determines whether a vent stream flow is present at least once every hour. A manual block valve equipped with a valve position indicator may be used in lieu of a flow indicator, as long as the valve position indicator is monitored continuously. Records shall be generated as specified in Conditions 136.5.and 139.10. The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere; or

(ii) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the non-diverting position and that the vent stream is not diverted through the bypass line; or

(iii) Use a cap, blind flange, plug, or a second valve for an open-ended valve or line following the requirements specified in Conditions 118.1.a, 118.2, and 118.3.

[40 C.F.R. 63.644(c) & (c)(1) – (3), Subpart CC]

e. Use of the bypass at any time to divert a Group 1 miscellaneous process vent stream to the atmosphere or to a control device that does not comply with the requirements in Condition 136.1 is an emissions standards violation. Equipment such as low leg drains and equipment subject to Condition 134 (Equipment Leaks) are not subject to Condition 136.4.d.

[40 C.F.R. 63.644(c), Subpart CC]

f. The Permittee shall establish a range that ensures compliance with the emissions standard for each parameter monitored under Conditions 136.4.a through 136.4.c. In order to establish the range, the information required in 40 C.F.R. 63.655(f)(3) shall be submitted in the NOCS report required in Condition 139.5.

[40 C.F.R. 63.644(d), Subpart CC]

g. The Permittee shall operate the control device in a manner consistent with the minimum and/or maximum operating parameter value or procedure required to be monitored under Conditions 136.4.a through 136.4.c. Operation of the control device in a manner that constitutes a period of excess emissions, as defined in Condition 136.5.c(i), or failure to perform procedures required by this section shall constitute a violation of the applicable emission standard of this subpart.

[40 C.F.R. 63.644(e), Subpart CC]

Recordkeeping and Reporting Requirements

136.5. The Permittee shall comply with the following recordkeeping and reporting requirements for miscellaneous process vents:

[40 C.F.R. 63.655(e), (g), (h) & (i), Subpart CC]

a. For continuous monitoring of operating parameters required in Condition 136.4.a(i), the Permittee shall keep the records specified in Conditions 136.5.a(i) through 136.5.a(v) unless an alternative recordkeeping system has been requested and approved under Condition 139.10.a.

(i) The monitoring system shall measure data values at least once every hour.

(ii) Record data of the continuously monitored parameter in accordance with the procedures specified in 40 C.F.R. 63.655(i)(3)(ii).

(iii) Daily average values of each continuously monitored parameter shall be calculated for each operating day and retained for 5 years except as specified in Condition 136.5.a(iv).

(iv) If all recorded values for a monitored parameter during an operating day are within the range established in the NOCS report, the Permittee may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average for that day. For these days, the records required in Condition 136.5.a(ii) shall also be retained for 5 years.

(v) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in any average computed under this subpart. Keep records of the times and durations of all such periods and any other periods during process or control device operation when monitors are not operating.

[40 C.F.R. 63.655(i)(3)(i) – (v), Subpart CC]

b. For each maintenance vent opening subject to the requirements in Condition 136.2, the Permittee shall keep the applicable records specified in Conditions136.5.b(i) through 136.5.b(vi):

(i) The Permittee shall maintain standard site procedures used to deinventory equipment for safety purposes (e.g., hot work or vessel entry procedures) to document the procedures used to meet the requirements in Condition 136.2. The current copy of the procedures shall be retained and available on-site at all times. Previous versions of the standard site procedures, if applicable, shall be retained for five years.

(ii) If complying with the requirements of Condition 136.2.b(i)(A) and the lower explosive limit at the time of the vessel opening exceeds 10 percent,

(A) identification of the maintenance vent,

(B) the process units or equipment associated with the maintenance vent,

(C) the date of maintenance vent opening, and

(D) the lower explosive limit at the time of the vessel opening.

(iii) If complying with the requirements of Condition 136.2.b(i)(B) and either the vessel pressure at the time of the vessel opening exceeds 5 psig or the lower explosive limit at the time of the active purging was initiated exceeds 10 percent,

(A) the same records required in Conditions 136.5.b(ii)(A) through 136.5.b(ii)(C),

(B) the pressure of the vessel or equipment at the time of discharge to the atmosphere, and

(C) if applicable, the lower explosive limit of the vapors in the equipment when active purging was initiated.

(iv) If complying with the requirements of Condition 136.2.b(i)(C),

(A) records used to estimate the total quantity of VOC in the equipment and the type and size limits of equipment that contain less than 72 pounds of VOC at the time of maintenance vent opening.

(B) For each maintenance vent opening for which the inventory procedures specified in Condition 136.5.b(i) are not followed or for which the equipment opened exceeds the type and size limits established in the records specified in this condition,

(1) the same records required in Conditions 136.5.b(ii)(A) through 136.5.b(ii)(C), and

(2) records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere or each applicable maintenance vent opening.

(v) If complying with the requirements of Condition 136.2.b(i)(D),

(A) the same records required in Conditions 136.5.b(ii)(A) through 136.5.b(ii)(C),

(B) records documenting the lack of a pure hydrogen supply, and

(C) the lower explosive limit of the vapors in the equipment at the time of discharge to the atmosphere for each applicable maintenance vent opening.

(vi) If complying with the requirements of Condition 136.2.b(i)(E),

(A) the same records required under Condition 136.5.b(iv)(B),

(B) records documenting actions taken to comply with other applicable alternatives and why utilization of this alternative was required,

(C) the equipment pressure and lower explosive limit of the vapors in the equipment at the time of discharge,

(D) an indication of whether active purging was performed and the pressure of the equipment during the installation or removal of the blind if active purging was used, and

(E) the duration the maintenance vent was open during the blind installation or removal process.

[40 C.F.R. 63.655(i)(12), Subpart CC]

c. For miscellaneous process vents for which continuous parameter monitors are required as indicated in Condition 136.4.a(i), periods of excess emissions shall be identified in the Periodic Reports required in Condition 139.7 and shall be used to determine compliance with the emission standards.

(i) Period of excess emission means any of the following conditions:

(A) An operating day when the daily average value of a monitored parameter, except presence of a flare pilot flame, is outside the range specified in the NOCS report. Monitoring data recorded during periods of monitoring system breakdown, repairs, calibration checks and zero (low-level) and high-level adjustments shall not be used in computing daily average values of monitored parameters.

(B) An operating day when all pilot flames of a flare are absent.

(C) An operating day when monitoring data required to be recorded in Conditions 136.5.a(i) and 136.5.a(ii) are available for less than 75 percent of the operating hours.

(D) For data compression systems under Condition 139.10.a(iii), an operating day when the monitor operated for less than 75 percent of the operating hours or a day when less than 18 monitoring values were recorded.

(ii) For miscellaneous process vents, excess emissions shall be reported for the operating parameters specified in Table 10 of this subpart unless other site-specific parameter(s) have been approved by the operating permit authority.

(iii) For periods in closed vent systems when a Group 1 miscellaneous process vent stream was detected in the bypass line or diverted from the control device and either directly to the atmosphere or to a control device that does not comply with the requirements in Condition 136.1, report the date, time, duration, estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting mass emissions of organic HAP that bypassed the control device. For periods when the flow indicator is not operating, report the date, time, and duration.

[40 C.F.R. 63.655(e)(2) & (g)(6)(i) – (iii), Subpart CC]

d. For maintenance vents subject to the requirements in Condition 136.2, Periodic Reports required in Condition 139.7 must include the information specified in Conditions 136.5.d(i) through 136.5.d(iv) for any release exceeding the applicable limits in Condition 136.2.b(i).

(i) Identification of the maintenance vent and the equipment served by the maintenance vent.

(ii) The date and time the maintenance vent was opened to the atmosphere.

(iii) The lower explosive limit, vessel pressure, or mass of VOC in the equipment, as applicable, at the start of atmospheric venting. If the 5 psig vessel pressure option in Condition 136.2.b(i)(B) was used and active purging was initiated while the lower explosive limit was 10 percent or greater, also include the lower explosive limit of the vapors at the time active purging was initiated.

(iv) An estimate of the mass of organic HAP released during the entire atmospheric venting event.

[40 C.F.R. 63.655(e)(2) & (g)(13)(i) – (iv), Subpart CC]

e. For the purposes of the reporting requirement of Condition 136.5.d, the Permittee must report the following:

(i) if complying with Condition 136.2.b(i)(D), each venting event for which the lower explosive limit is 20 percent or greater;

(ii) if complying with Condition 136.2.b(i)(E), each venting event conducted under those provisions and include an explanation for each event as to why utilization of this alternative was required.

[40 C.F.R. 63.655(e)(2) & (g)(13), Subpart CC]

f. If requesting for approval to monitor a different parameter than those listed in Condition 136.4.a(i) for miscellaneous process vents, the Permittee shall

submit the information specified in Conditions 136.5.f(i) through. 136.5.f(iii). For new or reconstructed sources, the information shall be submitted with the application for approval of construction or reconstruction required by 40 C.F.R. 63.5(d) Subpart A and for existing sources, and the information shall be submitted no later than 18 months prior to the compliance date. The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal.

(i) A description of the parameter(s) to be monitored to determine whether excess emissions occur and an explanation of the criteria used to select the parameter(s).

(ii) A description of the methods and procedures that will be used to demonstrate that the parameter can be used to determine excess emissions and the schedule for this demonstration. The Permittee must certify that they will establish a range for the monitored parameter as part of the NOCS report required in paragraphs (e) and (f) of this section.

(iii) The frequency and content of monitoring, recording, and reporting if: monitoring and recording are not continuous; or if periods of excess emissions, as defined in paragraph (g)(6) of this section, will not be identified in Periodic Reports required under paragraphs (e) and (g) of this section. The rationale for the proposed monitoring, recording, and reporting system shall be included.

[40 C.F.R. 63.655(e)(3) & (h)(4)(i) – (iii), Subpart CC]

137. Heat Exchange Systems Requirements. Except as as specified in Condition 137.1, for EU ID 131 *[Cooling Tower]*, the Permittee shall comply with the requirements in Condtions 137.2 through 137.9.

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & c(6)]
[40 C.F.R. 63.640(c)(8), 63.654(a) – (g), and 63.655e) & (g) - (i), Subpart CC]

137.1. EUID 131 is exempt from the requirements in Conditions 137.2 through 137.9 if all heat exchangers within the heat exchange system either:

a. Operate with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side; or

b. Employ an intervening cooling fluid containing less than 5 percent by weight of total organic HAP, as determined according to the provisions of 40 C.F.R. 63.180(d) Subpart H and Table 1 to Subpart CC, between the process and the cooling water. This intervening fluid must serve to isolate the cooling water from the process fluid and must not be sent through a cooling tower or discharged. For purposes of this condition, discharge does not include emptying for maintenance purposes.

[40 C.F.R. 63.654(b), Subpart CC]

Monitoring Requirements

137.2. Perform monitoring to identify leaks of total strippable volatile organic compounds (VOC) from EU ID 131 according to the procedures in 40 C.F.R. 63.654(c)(1) through (6).

a. *Monitoring locations for closed-loop recirculation heat exchange systems.* For each closed loop recirculating heat exchange system, collect and analyze a sample from the location(s) described in either Condition 137.2.a(i) or 137.2.a(ii).

(i) Each cooling tower return line or any representative riser within the cooling tower prior to exposure to air for each heat exchange system.

(ii) Selected heat exchanger exit line(s) so that each heat exchanger or group of heat exchangers within a heat exchange system is covered by the selected monitoring location(s).

[40 C.F.R. 63.654(c)(1), Subpart CC]

b. *Monitoring locations for once-through heat exchange systems.* For each once-through heat exchange system, collect and analyze a sample from the location(s) described in Condition 137.2.b(i). The Permittee may also elect to collect and analyze an additional sample from the location(s) described in Condition 137.2.b(ii).

(i) Selected heat exchanger exit line(s) so that each heat exchanger or group of heat exchangers within a heat exchange system is covered by the selected monitoring location(s). The selected monitoring location may be at a point where discharges from multiple heat exchange systems are combined provided that the combined cooling water flow rate at the monitoring location does not exceed 40,000 gallons per minute.

(ii) The inlet water feed line for a once-through heat exchange system prior to any heat exchanger. If multiple heat exchange systems use the same water feed (i.e., inlet water from the same primary water source), the Permittee may monitor at one representative location and use the monitoring results for that sampling location for all heat exchange systems that use that same water feed.

[40 C.F.R. 63.654(c)(2), Subpart CC]

c. *Monitoring method.* Determine the total strippable hydrocarbon concentration (in parts per million by volume (ppmv) as methane) at each monitoring location using the "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling Tower Monitoring, prepared by Texas Commission on Environmental Quality, January 31, 2003 (incorporated by reference—see §63.14) using a flame ionization detector (FID) analyzer for

on-site determination as described in Section 6.1 of the Modified El Paso Method.

[40 C.F.R. 63.654(c)(3), Subpart CC]

d. *Monitoring frequency and leak action level for existing sources.* For a heat exchange system at an existing source, the Permittee must comply with the monitoring frequency and leak action level as defined in Condition 137.2.d(i) or comply with the monitoring frequency and leak action level as defined in Condition 137.2.d(ii). The Permittee may choose to comply with Condition 137.2.d(i) for some heat exchange systems at the petroleum refinery and comply with Condition 137.2.d(ii) for other heat exchange systems. However, for each affected heat exchange system, the Permittee must elect one monitoring alternative that will apply at all times. If the Permittee intends to change the monitoring alternative that applies to a heat exchange system, the Permittee must notify the Administrator 30 days in advance of such a change. All "leaks" identified prior to changing monitoring alternatives must be repaired. The monitoring frequencies specified in Conditions 137.2.d(i) and 137.2.d(ii) also apply to the inlet water feed line for a once-through heat exchange system, if monitoring of the inlet water feed is elected as provided in Condition 137.2.b(ii).

(i) Monitor monthly using a leak action level defined as a total strippable hydrocarbon concentration (as methane) in the stripping gas of 6.2 ppmv.

(ii) Monitor quarterly using a leak action level defined as a total strippable hydrocarbon concentration (as methane) in the stripping gas of 3.1 ppmv unless repair is delayed as provided in Condition 137.5. If a repair is delayed as provided Condition 137.5, monitor monthly.

[40 C.F.R. 63.654(c)(4), Subpart CC]

e. *Monitoring frequency and leak action level for new sources.* For a heat exchange system at a new source, the Permittee must monitor monthly using a leak action level defined as a total strippable hydrocarbon concentration (as methane) in the stripping gas of 3.1 ppmv.

[40 C.F.R. 63.654(c)(5), Subpart CC]

f. *Leak definition.* A leak is defined as described in Condition 137.2.f(i) or Condition 137.2.f(ii), as applicable.

(i) For once-through heat exchange systems for which the inlet water feed is monitored as described in Condition 137.2.b(ii), a leak is detected if the difference in the measurement value of the sample taken from a location specified in Condition 137.2.b(i) and the measurement value of the corresponding sample taken from the location specified in Condition 137.2.b(ii) equals or exceeds the leak action level.

(ii) For all other heat exchange systems, a leak is detected if a measurement value of the sample taken from a location specified in either Condition 137.2.a(i), 137.2.a(ii) , or 137.2.b(i) equals or exceeds the leak action level.

[40 C.F.R. 63.654(c)(1) – (c)(6), Subpart CC]

137.3. If a leak is detected, repair the leak to reduce the measured concentration to below the applicable action level as soon as practicable, but no later than 45 days after identifying the leak, except as specified in Conditions 137.4 and 137.5. Repair includes re-monitoring at the monitoring location where the leak was identified according to the method specified in 40 C.F.R. 63.654(c)(3) to verify that the measured concentration is below the applicable action level. Actions that can be taken to achieve repair include but are not limited to:

a. Physical modifications to the leaking heat exchanger, such as welding the leak or replacing a tube;

b. Blocking the leaking tube within the heat exchanger;

c. Changing the pressure so that water flows into the process fluid;

d. Replacing the heat exchanger or heat exchanger bundle; or

e. Isolating, bypassing, or otherwise removing the leaking heat exchanger from service until it is otherwise repaired.

[40 C.F.R. 63.654(d)(1) – (d)(5), Subpart CC]

137.4. If a leak is detected when monitoring a cooling tower return line under 40 C.F.R. 63.654(c)(1)(i), the Permittee may conduct additional monitoring of each heat exchanger or group of heat exchangers associated with the heat exchange system for which the leak was detected as provided under 40 C.F.R. 63.654(c)(1)(ii) of this section. If no leaks are detected when monitoring according to the requirements of 40 C.F.R. 63.654(c)(1)(ii), the heat exchange system is considered to meet the repair requirements through re-monitoring of the heat exchange system as provided in Condition 137.3.

[40 C.F.R. 63.654(e), Subpart CC]

137.5. The Permittee may delay the repair of a leaking heat exchanger when one of the Conditions in 137.5.a or 137.5.b is met and the leak is less than the delay of repair action level specified in Condition137.5.c. The Permittee must determine if a delay of repair is necessary as soon as practicable, but no later than 45 days after first identifying the leak.

a. If the repair is technically infeasible without a shutdown and the total strippable hydrocarbon concentration is initially and remains less than the delay of repair action level for all monthly monitoring periods during the delay of repair, the Permittee may delay repair until the next scheduled shutdown of the heat exchange system. If, during subsequent monthly monitoring, the delay of repair action level is exceeded, the Permittee must

repair the leak within 30 days of the monitoring event in which the leak was equal to or exceeded the delay of repair action level.

[40 C.F.R. 63.654(f)(1), Subpart CC]

b. If the necessary equipment, parts, or personnel are not available and the total strippable hydrocarbon concentration is initially and remains less than the delay of repair action level for all monthly monitoring periods during the delay of repair, the Permittee may delay the repair for a maximum of 120 calendar days. The Permittee must demonstrate that the necessary equipment, parts, or personnel were not available. If, during subsequent monthly monitoring, the delay of repair action level is exceeded, the owner or operator must repair the leak within 30 days of the monitoring event in which the leak was equal to or exceeded the delay of repair action level.

[40 C.F.R. 63.654(f)(2), Subpart CC]

c. The delay of repair action level is a total strippable hydrocarbon concentration (as methane) in the stripping gas of 62 ppmv. The delay of repair action level is assessed as described in 137.5.c(i) or 137.5.c(ii), as applicable.

(i) For once-through heat exchange systems for which the inlet water feed is monitored as described in 40 C.F.R. 63.654(c)(2)(ii), the delay of repair action level is exceeded if the difference in the measurement value of the sample taken from a location specified in paragraph 63.654(c)(2)(i) and the measurement value of the corresponding sample taken from the location specified in 40 C.F.R. 63.654(c)(2)(ii) equals or exceeds the delay of repair action level.

(ii) For all other heat exchange systems, the delay of repair action level is exceeded if a measurement value of the sample taken from a location specified in either 40 C.F.R.63.654(c)(1)(i), (c)(1)(ii), or (c)(2)(i) equals or exceeds the delay of repair action level.

[40 C.F.R. 63.654(f)(3), Subpart CC]

Recordkeeping and Reporting Requirements

137.6. To delay the repair under Condition 137.5, record the following information:

a. The reason(s) for delaying repair;

b. A schedule for completing the repair as soon as practical;

c. The date and concentration of the leak as first identified and the results of all subsequent monthly monitoring events during the delay of repair; and

d. An estimate of the potential strippable hydrocarbon emissions from the leaking heat exchange system or heat exchanger for each required delay of repair monitoring interval following the procedures in 40 C.F.R. 63.654(g)(4)(i) through (iv).

[40 C.F.R. 63.654(g)(1) - (4), Subpart CC]

137.7. The Permittee shall keep records of the information listed in Conditions 137.7.a through 137.7.e and retain these records for 5 years.

a. Identification of all petroleum refinery process unit heat exchangers at the facility and the average annual HAP concentration of process fluid or intervening cooling fluid estimated when developing the NOCS report.

b. Identification of all heat exchange systems subject to the monitoring requirements in Conditions 137.2 through 137.5 and identification of all heat exchange systems that are exempt from the monitoring requirements according to the provisions in Condition 137.1. For each heat exchange system that is subject to the monitoring requirements, this must include identification of all heat exchangers within each heat exchange system, and, for closed-loop recirculation systems, the cooling tower included in each heat exchange system.

c. Results of the following monitoring data for each required monitoring event:

(i) Date/time of event.

(ii) Barometric pressure.

(iii) El Paso air stripping apparatus water flow milliliter/minute (ml/min) and air flow, ml/min, and air temperature, °Celsius.

(iv) FID reading (ppmv).

(v) Length of sampling period.

(vi) Sample volume.

(vii) Calibration information identified in Section 5.4.2 of the "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" Revision Number One, dated January 2003, Sampling Procedures Manual, Appendix P: Cooling Tower Monitoring, prepared by Texas Commission on Environmental Quality, January 31, 2003 (incorporated by reference—see §63.14).

d. The date when a leak was identified, the date the source of the leak was identified, and the date when the heat exchanger was repaired or taken out of service.

e. If a repair is delayed, the reason for the delay, the schedule for completing the repair, the heat exchange exit line flow or cooling tower return line average flow rate at the monitoring location (in gallons/minute), and the estimate of potential strippable hydrocarbon emissions for each required monitoring interval during the delay of repair.

[40 C.F.R. 63.655(i)(5)(i) – (v), Subpart CC]

137.8. For heat exchange systems, Periodic Reports required in Condition 139.7 must include the following information:

a. The number of heat exchange systems at the plant site subject to the monitoring requirements in Condition137.2;

b. The number of heat exchange systems at the plant site found to be leaking;

c. For each monitoring location where the total strippable hydrocarbon concentration was determined to be equal to or greater than the applicable leak definitions specified in Condition 137.2.f,

(i) identification of the monitoring location (e.g., unique monitoring location or heat exchange system ID number),

(ii) the measured total strippable hydrocarbon concentration,

(iii) the date the leak was first identified, and,

(iv) if applicable, the date the source of the leak was identified;

d. For leaks that were repaired during the reporting period (including delayed repairs),

(i) identification of the monitoring location associated with the repaired leak,

(ii) the total strippable hydrocarbon concentration measured during re-monitoring to verify repair, and

(iii) the re-monitoring date (*i.e.*, the effective date of repair); and

e. For each delayed repair,

(i) identification of the monitoring location associated with the leak for which repair is delayed,

(ii) the date when the delay of repair began,

(iii) the date the repair is expected to be completed (if the leak is not repaired during the reporting period),

(iv) the total strippable hydrocarbon concentration and date of each monitoring event conducted on the delayed repair during the reporting period, and

(v) an estimate of the potential strippable hydrocarbon emissions over the reporting period associated with the delayed repair.

[40 C.F.R. 63.655(e)(2) & (g)(9)(i) – (v), Subpart CC]

137.9. Notify the Administrator at least 30 calendar days prior to changing from one of the monitoring options specified in Condition 137.2.d to the other.

[40 C.F.R. 63.655(e)(3) & (h)(7), Subpart CC]

138. Fenceline Monitoring Requirements. The Permittee shall conduct sampling along the facility property boundary and analyze the samples in accordance with Methods 325A and 325B of Appendix A to 40 C.F.R. 63 and 40 C.F.R. 63.658(b) through (k).##

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & c(6)]
[40 C.F.R. 63.658((a) – (k), and 63.655(h) & (i), Subpart CC]

138.1. The target analyte is benzene.

[40 C.F.R. 63.658(b), Subpart CC]

138.2. As outlined in 40 C.F.R. 63.7(f), the Permittee may submit a request for an alternative test method. At a minimum, the request must follow the requirements outlined in 40 C.F.R. 63.658(k)(1) through (7).

[40 C.F.R. 63.658(k), Subpart CC]

Recordkeeping and Reporting Requirements

138.3. The Permittee shall comply with the following recordkeeping and reporting requirements:

[40 C.F.R. 63.658(j) and 63.655(h)(8) & (i)(8), Subpart CC]

a. Keep the records specified in Conditions 138.3.a(i) through 138.3.a(x) on an ongoing basis.

(i) Coordinates of all passive monitors, including replicate samplers and field blanks, and if applicable, the meteorological station. The Permittee shall determine the coordinates using an instrument with an accuracy of at least 3 meters. The coordinates shall be in decimal degrees with at least five decimal places.

(ii) The start and stop times and dates for each sample, as well as the tube identifying information.

(iii) Sampling period average temperature and barometric pressure measurements.

(iv) For each outlier determined in accordance with Section 9.2 of Method 325A, the sampler location of and the concentration of the outlier and the evidence used to conclude that the result is an outlier.

(v) For samples that will be adjusted for a background, the location of and the concentration measured simultaneously by the background sampler, and the perimeter samplers to which it applies.

(vi) Individual sample results, the calculated Δc for benzene for each sampling period and the two samples used to determine it, whether background correction was used, and the annual average Δc calculated after each sampling period.

(vii) Method detection limit for each sample, including co-located samples and blanks.

(viii) Documentation of corrective action taken each time the action level was exceeded.

(ix) Other records as required by Methods 325A and 325B.

(x) If a near-field source correction is used as provided in 40 C.F.R. 63.658(i), records of hourly meteorological data, including temperature, barometric pressure, wind speed and wind direction, calculated daily unit vector wind direction and daily sigma theta, and other records specified in the site-specific monitoring plan.

[40 C.F.R. 63.655(i)(8) (i) - (x), Subpart CC]

b. Submit the following information to the EPA's Compliance and Emissions Data Reporting Interface (CEDRI) on a quarterly basis. (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/). The first quarterly report must be submitted once the Permittee has obtained 12 months of data. The first quarterly report must cover the period beginning on the compliance date that is specified in Table 11 of this subpart and ending on March 31, June 30, September 30 or December 31, whichever date is the first date that occurs after the owner or operator has obtained 12 months of data (i.e., the first quarterly report will contain between 12 and 15 months of data). Each subsequent quarterly report must cover one of the following reporting periods: Quarter 1 from January 1 through March 31; Quarter 2 from April 1 through June 30; Quarter 3 from July 1 through September 30; and Quarter 4 from October 1 through December 31. Each quarterly report must be electronically submitted no later than 45 calendar days following the end of the reporting period.

(i) Facility name and address.

(ii) Year and reporting quarter (i.e., Quarter 1, Quarter 2, Quarter 3, or Quarter 4).

(iii) For the first reporting period and for any reporting period in which a passive monitor is added or moved, for each passive monitor: The latitude and longitude location coordinates; the sampler name; and identification of the type of sampler (i.e., regular monitor, extra monitor, duplicate, field blank, inactive). The owner or operator shall determine the coordinates using an instrument with an accuracy of at least 3 meters. Coordinates shall be in decimal degrees with at least five decimal places.

(iv) The beginning and ending dates for each sampling period.

(v) Individual sample results for benzene reported in units of µg/m3 for each monitor for each sampling period that ends during the reporting period. Results below the method detection limit shall be flagged as below the detection limit and reported at the method detection limit.

(vi) Data flags that indicate each monitor that was skipped for the sampling period, if the owner or operator uses an alternative sampling frequency under §63.658(e)(3).

(vii) Data flags for each outlier determined in accordance with Section 9.2 of Method 325A of appendix A of this part. For each outlier, the owner or operator must submit the individual sample result of the outlier, as well as the evidence used to conclude that the result is an outlier.

(viii) The biweekly concentration difference (Δc) for benzene for each sampling period and the annual average Δc for benzene for each sampling period.

[40 C.F.R. 63.655(h)(8)(i) – (viii), Subpart CC]

139. NESHAP Subpart CC General Recordkeeping and Reporting Requirements. The Permittee shall keep records and report as follows:

[18 AAC 50.040(c)(10) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii) & c(6)]
[40 C.F.R. 63.642(e) & (f) and 63.655(e) – (i), Subpart CC]

139.1. Keep copies of all applicable reports and records required by this subpart for at least 5 years. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, flash drive, floppy disk, magnetic tape, or microfiche.

[40 C.F.R. 63.655(i) & (i)(6), Subpart CC]

139.2. If required to report the **results of performance tests** under Condition 139.6 and 139.8 shall retain a record of all reported results as well as a complete test report, as described in 40 C.F.R. 63.655(f)(2)(ii) for each emission point tested.

[40 C.F.R. 63.655(i)(2), Subpart CC]

139.3. Submit all reports required under this subpart to the Administrator at the addresses listed in 40 C.F.R. 63.13 Subpart A, or may be submitted on electronic media.

[40 C.F.R. 63.642(f), Subpart CC]

139.4. Submit the reports listed in Conditions 139.4.a through 139.4.c except as provided in Condition 139.10.a, and shall keep records as described in Condition 139.1.

a. A NOCS report as described in Conditions 139.5 and 139.6;

b. Periodic Reports as described in Condition 139.7; and

c. Other reports as described in Condition 139.10.

[40 C.F.R. 63.655(e)(1) – (3), Subpart CC]

Notification of Compliance Status (NOCS).

139.5. Except as provided for in Condition 139.6, the Permittee shall submit a NOCS report within 150 days after the compliance dates specified in 40 C.F.R. 63.640(h), in accordance with 40 C.F.R. 63.655(f)(1) through (f)(5), as they apply to each affected emissions unit.

a. The Permittee may submit this information in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination of the three.

b. If the required information has been submitted before the date 150 days after the compliance date specified in §63.640(h), a separate NOCS report is not required within 150 days after the compliance dates specified in §63.640(h).

c. If the Permittee submits the information specified in 40 C.F.R. 63.655(f)(1) through (f)(5) at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information.

[40 C.F.R. 63.655(e)(1) & (f)(1) – (5), Subpart CC]

139.6. *NOCS Requirements for emissions units added to a plant site subject to the requirements for existing sources.* To comply with Condition 139.4.a, submit NOCS reports that apply to affected emissions units under Condition 126.2 (i.e., petroleum refining process unit or a storage vessel, miscellaneous process vent, wastewater stream, gasoline loading rack, marine tank vessel loading operation, heat exchange system, or decoking operation meeting the criteria in 40 C.F.R.63.640(c)(1) through (9) added to the plant site*)* as follows:

a. Submit NOCS reports no later than 60 days after the end of the 6-month period during which the change or addition was made that resulted in the Group 1 emission point, and may be combined with the periodic report.

b. Six-month periods shall be the same 6-month periods specified in the periodic reports required in Condition 139.7.

c. Include the information specified in 40 C.F.R. 63.655(f)(1) through (f)(5). This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, as part of the periodic report, or in any combination of these four.

d. If the required information has been submitted before the date 60 days after the end of the 6-month period in which the addition of the Group 1 emission point took place, a separate NOCS report is not required within 60 days after the end of the 6-month period.

e. If the Permittee submits the information specified in 40 C.F.R. 63.655(f)(1) through (f)(5) at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information.

[40 C.F.R. 63.640(l)(3) and 63.655(e)(1), (f) & (f)(6), Subpart CC]

Periodic Reports

139.7. The Permittee shall submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the information specified in Conditions 133.2, 133.3, 134.10.f, 135.2.b, 136.5.c through 136.5.e, 137.8, 139.8, or 139.9 is collected.

a. The first 6-month period shall begin on the date the NOCS report is required to be submitted.

b. A Periodic Report is not required if none of the events identified in Conditions 133.3, 134.10.f, 135.2.b, 136.5.c, 136.5.d, 137.8, 139.8, or 139.9 occurred during the 6-month period unless emissions averaging is utilized.

c. The Permittee may submit reports required by other regulations in place of or as part of the Periodic Report required by condition if the reports contain the information required by Conditions 133.3, 136.5.c, 136.5.d, 134.10.f, 135.2.b, 137.8, 139.8, and 139.9.

[40 C.F.R. 63.655(e)(2) & (g), Subpart CC]

139.8. If a performance test for determination of compliance for a new emission point subject to this subpart or for an emission point that has changed from Group 2 to Group 1 is conducted during the period covered by a Periodic Report, the results of the performance test shall be included in the Periodic Report.

a. Results of the performance test shall include:

(i) the identification of the source tested,

(ii) the date of the test,

(iii) the percentage of emissions reduction or outlet pollutant concentration reduction (whichever is needed to determine compliance) for each run and for the average of all runs, and

(iv) the values of the monitored operating parameters.

b. The complete test report shall be maintained onsite.

[40 C.F.R. 63.655(e)(2) & (g)(7), Subpart CC]

139.9. Any changes in the information provided in a previous NOCS report.

[40 C.F.R. 63.655(e)(2) & (g)(14), Subpart CC]

Other Reports

139.10. Other reports shall be submitted as specified in 40 C.F.R. 63 Subpart A and as specified in Conditions 133.4, 136.5.f, 137.9, 138.3.b, and as follows:

a. The Permittee may request approval to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in Condition 136.5.a.

(i) Submit requests with the Application for Approval of Construction or Reconstruction for new sources and no later than 18 months prior to the compliance date for existing sources.

(A) The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal.

(B) Requests shall contain the information specified in Condition 139.10.a(iii), as applicable.

(ii) The provisions in 40 C.F.R. 63.8(f)(5)(i) Subpart A shall govern the review and approval of requests.

(iii) The Permittee may request approval to use other alternative monitoring systems according to the procedures specified in 40 C.F.R. 63.8(f) Subpart A.

[40 C.F.R. 63.655(e)(3) and (h)(5)(i), (ii), & (iv), Subpart CC]

b. The Permittee shall submit the information specified in Conditions 139.10.b(i) through 139.10.b(iii), as applicable. For existing sources, this information shall be submitted in the initial NOCS report. For a new source, the information shall be submitted with the application for approval of construction or reconstruction required by 40 C.F.R. 63.5(d) Subpart A. The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal.

(i) The determination of applicability of this subpart to petroleum refining process units that are designed and operated as flexible operation units.

(ii) The determination of applicability of this subpart to any storage vessel for which use varies from year to year.

(iii) The determination of applicability of this subpart to any distillation unit for which use varies from year to year.

[40 C.F.R. 63.655(e)(3) & (h)(6)(i) – (iii), Subpart CC]

c. On and after February 1, 2016, if required to submit the results of a performance test, the Permittee shall submit the results according to the procedures in Condition139.10.c(i).

(i) Unless otherwise specified by this subpart, within 60 days after the date of completing each performance test as required by this subpart, the owner or operator shall submit the results of the performance tests following the procedure specified in either 40 C.F.R. 63.655(h)(9)(i)(A) or (B).

(A) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (*http://www.epa.gov/ttn/chief/ert/index.html*) at the time of the test, the Permittee must submit the results of the performance test to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site.

(B) If the Permittee claims that some of the performance test information being submitted is confidential business information (CBI), the Permittee must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The electronic storage media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph (h)(9)(i)(A).

(C) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, the Permittee must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13.

[40 C.F.R. 63.655(e)(3) & (h)(9)(i), Subpart CC]

d. If required to electronically submit a report through the Compliance and Emissions Data Reporting Interface (CEDRI) in the EPA's Central Data Exchange (CDX), and due to a planned or actual outage of either the EPA's CEDRI or CDX systems within the period of time beginning 5 business days prior to the date that the submission is due, the Permittee will be or is precluded from accessing CEDRI or CDX and submitting a required report within the time prescribed, the Permittee may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. The Permittee shall:

(i) Submit notification to the Administrator in writing as soon as possible following the date the Permittee first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting.

(ii) Provide the following to the Administrator:

(A) a written description identifying the date(s) and time(s) the CDX or CEDRI were unavailable when the Permittee attempted to access it in the 5 business days prior to the submission deadline;

(B) a rationale for attributing the delay in reporting beyond the regulatory deadline to the EPA system outage;

(C) description of the measures taken or to be taken to minimize the delay in reporting; and

(D) a date by which the Permittee proposes to report, or if already met the reporting requirement at the time of the notification, the date it was reported.

(iii) In any circumstance, submit the report electronically as soon as possible after the outage is resolved.

(iv) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

40 C.F.R. 63.655(e)(3) & (h)(10)(i), Subpart CC]

e. If required to electronically submit a report through CEDRI in the EPA's CDX and a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning 5 business days prior to the date the submission is due, the Permittee may assert a claim of force majeure for failure to timely comply with the reporting requirement.

(i) For the purposes of this paragraph, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents the Permittee from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.,* hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.,* large scale power outage).

(ii) If the Permittee intends to assert a claim of force majeure, the Permittee must submit notification to the Administrator in writing as soon as possible following the date the Permittee first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting.

(iii) Provide the following to the Administrator:

(A) a written description of the force majeure event and a rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(B) description of the measures taken or to be taken to minimize the delay in reporting; and

(C) a date by which the Permittee proposes to report, or if already met the reporting requirement at the time of the notification, the date it was reported.

(D) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

(E) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

40 C.F.R. 63.655(e)(3) & (h)(10)(ii), Subpart CC]

NESHAP Subpart UUU – Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units

140. NESHAP Subpart UUU Applicability. The Permittee shall comply with applicable requirements under NESHAP Subpart UUU for the following affected EUs listed in Table A, located at a petroleum refinery that is a major source of HAP emissions:

140.1. EU IDs 42 *[J-801]* and 97 *[Powerformer]* – process vent[66] or group of process vents on catalytic reforming units that are associated with regeneration of the catalyst used in the unit, including vents that are used during the unit depressurization, purging, coke burn, and catalyst rejuvenation;

140.2. EU IDs 25 *[H-1105]* and 101 *[SRU]* – process vent or group of process vents on Claus or other types of sulfur recovery plant units or the tail gas treatment units serving sulfur recovery plants that are associated with sulfur recovery; and

140.3. Each bypass line serving the existing catalytic reforming unit (EU ID 97), or sulfur recovery unit (EU ID 101); this means each vent system that contains a bypass line (e.g., ductwork) that could divert an affected vent stream away from a control device used to comply with the requirements of this subpart.

[18 AAC 50.040(c)(19) and (j)(2)]
[40 C.F.R. 71.3(a)]
[40 C.F.R. 63.1561(a) and 63.1562(a) and (b)(2), (3), & (4)]

141. NESHAP Subpart UUU GAPCP and General Compliance Requirements. The Permittee shall comply with the following:

[66] *Process vent* means, for the purposes of this subpart, a gas stream that is continuously or periodically discharged during normal operation of a catalytic cracking unit, catalytic reforming unit, or sulfur recovery unit, including gas streams that are discharged directly to the atmosphere, gas streams that are routed to a control device prior to discharge to the atmosphere, or gas streams that are diverted through a product recovery device line prior to control or discharge to the atmosphere. [40 C.F.R. 63.1579, Subpart UUU]

141.1. The Permittee must be in compliance with all non-opacity standards and opacity and visible emission limits of Conditions 142 through 144 at all times.

141.2. At all times, the Permittee must 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 the Permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements 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.

141.3. Keep records and report in accordance with Conditions 147.1 and 149.2.

[18 AAC 50.040(c)(19) & (j)(4), and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1), (a)(3), & (c)(6)]
[40 C.F.R. 63.1570(a) - (d) & (f), Subpart UUU]

NESHAPS Subpart UUU Requirements, Powerformer (EU ID 97)

142. Emission and Operational Limitations, EU ID 97. For each applicable process vent for the existing catalytic reforming unit, EU ID 97, the Permittee shall comply with the following emission and operational limitations:

18 AAC 50.040(c)(19) & (j)(4), and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (c)(6)]

142.1. *For Organic HAP Emissions.* For each process vent for the existing catalytic reforming unit, EU ID 97, the Permittee shall meet the following emission and operational limitations that apply to organic HAP emissions by using a flare (EU ID 42) as a control device during initial catalyst depressuring and catalyst purging operations.

a. On and after January 30, 2019, the Permittee shall vent emissions to EU ID 42 that meets the requirements of 40 C.F.R. 63.670 Subpart CC (see Condition 135).

[40 C.F.R. 63.1566(a)(1)(i) & (a)(2) and Tables 15 (item 1) & 16 (item 1), Subpart UUU]

b. The emission limitations in Condition 142.1.a apply to emissions from catalytic reforming unit process vents associated with initial catalyst depressuring and catalyst purging operations that occur prior to the coke burn-off cycle. The emission limitations in Condition 142.1.a do not apply to the coke burn-off, catalyst rejuvenation, reduction or activation vents, or to the control systems used for these vents.

[40 C.F.R. 63.1566(a)(3), Subpart UUU]

c. On and after January 30, 2019, the emission limitations in Condition 142.1.a do apply to emissions from process vents during active purging operations (when nitrogen or other purge gas is actively introduced to the reactor vessel)

or active depressuring (using a vacuum pump, ejector system, or similar device) regardless of the reactor vent pressure.

[40 C.F.R. 63.1566(a)(4), Subpart UUU]

142.2. *For Inorganic HAP Emissions.* For each process vent for the existing semi-regenerative catalytic reforming unit, EU ID 97, the Permittee shall reduce uncontrolled emissions of hydrogen chloride (HCl) to a concentration of 30 ppmv (dry basis), corrected to 3 percent oxygen during coke burn-off and catalyst rejuvenation.

[40 C.F.R. 63.1567(a)(1)(ii) and Table 22 (item 1), Subpart UUU]

a. 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[67] performance test in accordance with the procedures described in 40 C.F.R. 63 Subpart UUU Tables 25 (item 3) and 26 (item 1) and the applicable requirements under 40 C.F.R. 63.1571.

[40 C.F.R. 63.1567(a)(2) & (b)(2) – (b)(5), , Subpart UUU]
[Tables 23 (item 2), 25 (item 3), & 26 (item 1), Subpart UUU]

b. If you operate a catalytic reforming unit in which different reactors in the catalytic reforming unit are regenerated in separate regeneration systems, then the emission limitation in Condition 142.2 applies to each separate regeneration system.

[40 C.F.R. 63.1567(a)(1), Subpart UUU]

c. The emission limitation in Condition 142.2 applies to emissions from catalytic reforming unit process vents associated with the coke burn-off and catalyst rejuvenation operations during coke burn-off and catalyst regeneration.

[40 C.F.R. 63.1567(a)(1), Subpart UUU]

d. The operating limit in Condition 142.2.a applies during coke burn-off and catalyst rejuvenation.

[40 C.F.R. 63.1567(a)(2), Subpart UUU]

NESHAPS Subpart UUU SRU (EU ID 101) HAP Emissions

143. Emission Limitation, EU ID 101. For the sulfur recovery unit (SRU), EU ID 101, that is subject to the NSPS Subpart J for sulfur oxides in 40 C.F.R. 60.104, the Permittee shall limit the emission of SO_2 to 250 ppmv (dry basis) at zero percent excess air as required by Condition 66.2.

18 AAC 50.040(c)(19) & (j)(4), and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (c)(6)]
[40 C.F.R. 63.1568(a)(1) and Table 29 (item 1a), Subpart UUU]

143.1. During periods of startup or shutdown of EU ID 101, the Permittee shall send any startup or shutdown purge gases to the SCOT Tail Gas Burner, EU ID 25, while it is

[67] 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.

operated at a minimum hourly average temperature of 1,200 degrees Fahrenheit in the firebox and a minimum hourly average outlet oxygen (O_2) concentration of 2 volume percent (dry basis).

[40 C.F.R. 63.1563(d)(1) and 63.1568(a)(4)(iii), Subpart UUU]

NESHAPS Subpart UUU Work Practice Standards

144. Work Practice Standards, EU IDs 97 and 101 and Bypass Lines. The Permittee shall comply with the following work practice standards:

18 AAC 50.040(c)(19) & (j)(4), and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (c)(6)]

144.1. For EU IDs 97 and 101 and bypass lines, prepare an operation, maintenance, and monitoring plan according to the requirements in 40 C.F.R. 63.1574(f) and operate at all times according to the procedures in the plan.

[40 C.F.R. 63.1566(a)(5), 63.1567(a)(3), 63.1568(a)(3), and 63.1569(a)(3), Subpart UUU]

144.2. For bypass lines, 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.

[40 C.F.R. 63.1569(a)(1)(i) and Table 36 (item 1), Subpart UUU]

NESHAPS Subpart UUU Monitoring Requirements

145. Initial and Continuous Compliance Demonstration. The Permittte shall demonstrate compliance with the emission and operational limitations and work practice standards under Conditions 142 and 144, as follows:

18 AAC 50.040(c)(19) & (j)(4), and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(i) & (c)(6)]

145.1. *For Organic HAP Emissions, EU ID 97.* To demonstrate initial[68] and continuous compliance with the emission and operational limitations under Condition 142.1, the Permittee shall comply with the following:

a. For compliance with Condition 142.1.a, on and after January 30, 2019, install and operate the monitoring systems required for EU ID 42 in 40 C.F.R. 63.670 and 63.671 (see Condition 135).

[40 C.F.R. 63.1566(b)(1), 63.1572(c) and Table 17, Subpart UUU]

b. Establish each site-specific operating limit in Condition 142.1.a that applies to you according to the procedures in Table 18 of this subpart.

[40 C.F.R. 63.1566(b)(3), Subpart UUU]

c. The Permittee does not need to do a TOC performance test since electing to vent emissions to a flare as required in Condition 142.1.a.

[40 C.F.R. 63.1566(b)(5)(i), Subpart UUU]

[68] The initial notification of compliance status for EU IDs 97 and 101 was submitted on September 7, 2005.

d. Demonstrate initial[69] compliance with each emission limitation in Condition 142.1.a according to Table 19 of this subpart.

[40 C.F.R. 63.1566(b)(6) and Table 19(item 1), Subpart UUU]

e. Demonstrate continuous compliance with each emission and operational limitations in Condition 142.1.a according to the methods specified in Tables 20 and 21 of this subpart.

145.2. *For Inorganic HAP Emissions, EU ID 97.* To demonstrate initial[70] and continuous compliance with the emission and operational limitations in Conditions 142.2 and 142.2.a, the Permittee shall comply with the following:

a. Operate and maintain a colormetric tube sampling system, according to the requirements in Condition 146.2, to measure the HCl concentration in the catalyst regenerator exhaust gas during coke burn-off and catalyst rejuvenation.

[40 C.F.R. 63.1567(b)(1) and Table 24 (item 2), Subpart UUU]

b. Demonstrate continuous compliance with each emission limitation in Condition 142.2 and 142.2.a by maintaining the HCl concentration limit required in Condition 142.2 and the daily average HCl concentration below the operating limit in Condition 142.2.a established during the initial performance test, during coke burn-off and catalyst rejuvenation.

[40 C.F.R. 63.1567(c)(1), Tables 27 (item 1) and 28 (item 2), Subpart UUU]

(i) Perform a source test for EU ID 97 during a regeneration cycle, in accordance with the procedures described in 40 C.F.R. 63 Subpart UUU Tables 25 (item 3) and 26 (item 1) and the applicable requirements in 40 C.F.R. 63.1571(b) through (e), to verify compliance with the HCl limit of Condition 142.2.a,within five years of the effective date of this permit or five years from the latest source test performed.

[18 AAC 50.040(j)(4) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(i) & (c)(6)]
[40 C.F.R. 63.1571(b) – (e), Tables 25 (item 3) and 26 (item 1), Subpart UUU]

(ii) Measure and record the HCl concentration at least 4 times during a regeneration cycle (equally spaced in time) or every 4 hours, whichever is more frequent, using a colormetric tube sampling system according to the requirements in Condition 146.2; and

(iii) 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.

[40 C.F.R. 63.1567(c)(1) and Table 28 (item 2), Subpart UUU]

[69] The initial notification of compliance status for EU IDs 97 and 101 was submitted on September 7, 2005.

[70] The initial notification of compliance status for EU IDs 97 and 101 was submitted on September 7, 2005.

145.3. *For HAP Emissions from SRU, EU ID 101.* To demonstrate initial[71] and continuous compliance with the emission limitation in Condition 143, the Permittee shall comply with the following:

a. Install, operate, and maintain a CEMS,# according to the requirements in Condition 67.2, to measure and record the hourly average concentration of SO_2 (dry basis) at zero percent excess air for the exhaust stack from EU IDs 25 located in EU ID 101.

b. To comply with the operational limitations during periods of startup or shutdown in Condition 143.1, install, operate, and maintain a CPMS,# according to the requirements in Condition 146.3, to measure and record the firebox temperature of each thermal incinerator (SCOT Tail Gas Burner, EU ID 25) and the oxygen content (percent, dry basis) in the exhaust vent from EU ID 25 located in EU ID 101.

[40 C.F.R. 63.1568(b)(1) and Table 31 (items 1 and 5), Subpart UUU]

c. Demonstrate continuous compliance with emission limitation of Condition 143 by:

(i) collecting the hourly average SO_2 monitoring data (dry basis, percent excess air) using a CEMS according to Conditions 146.1 and 146.4;

(ii) determining and recording each 12-hour rolling average concentration of SO_2;

(iii) maintaining each 12-hour rolling average concentration of SO_2 at or below the emission limitation in Condition 143; and

(iv) reporting any 12-hour rolling average concentration of SO_2 greater than the applicable emission limitation in the operating report required by Condition 205.

[40 C.F.R. 63.1568(c)(1) and Table 34 (item 1), Subpart UUU]

145.4. *For Work Practice Standards.* To demonstrate initial[72] and continuous compliance with the work practice standards under Condition 144, the Permittee shall comply with the following:

a. Demonstrate continuous compliance with work practice standards in Condition 144.1 by complying and maintaining records to document conformance with the procedures in the operation, maintenance and monitoring plan.

[40 C.F.R. 63.1566(c)(2), 63.1567(c)(2), 63.1568(c)(2), and 63.1569(c)(2), Subpart UUU]

b. For bypass lines, demonstrate continuous compliance with work practice standards in Condition 144.2 by

[71] An initial compliance test was conducted on September 28, 2005 which demonstrated compliance with the emission limit.

[72] The initial notification of compliance status for EU IDs 97 and 101 was submitted on September 7, 2005.

(i) monitoring and recording on a continuous basis whether flow is present in the bypass line; and

(ii) recording whether the device is operating properly and whether flow is present in the bypass line.

[40 C.F.R. 63.1569(c)(1) and Table 39 (item 1), Subpart UUU]

146. Continuous Monitoring System Requirements. Install, operate, and maintain each continuous monitoring system according to the following requirements:

146.1. **Continuous Emission Monitoring System (CEMS).** For SO_2 CEMS installed on EU ID 25 *[H-1105]*), the Permittee shall comply with the following:

a. Install, operate, and maintain a continuous emission monitoring system according to Condition 67.2 through 67.2.b.

b. Use Methods 6 or 6C (40 C.F.R. 60, Appendix A-4) for certifying the SO_2 monitor and Methods 3A or 3B (40 C.F.R. 60, Appendix A-2) for certifying the O_2 monitor; and Procedure 1 (40 C.F.R. 60, Appendix F) except relative accuracy test audits are required annually instead of quarterly.

c. 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.

d. 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) and Table 40 (item 5), Subpart UUU]

146.2. To demonstrate continuous compliance with the HCl concentration operating limit in Condition 142.2 for EU ID 97 **during periods of coke burn-off and catalyst rejuvenation**, use a colormetric tube sampling system with a printed numerical scale in ppmv, a standard measurement range of 1 to 10 ppmv (or 1 to 30 ppmv if applicable), and a standard deviation for measured values of no more than ±15 percent. System must include a gas detection pump and hot air probe if needed for the measurement range.

[40 C.F.R. 63.1572(c)(1) and Table 41 (item 3), Subpart UUU]

146.3. To demonstrate continuous compliance with the temperature and oxygen content operational limitation in Condition 143.1 for the incinerator firebox at the SCOT Tail Gas Burner (EU ID 25) **during periods of startup or shutdown**, the Permittee shall install, operate, and maintain each continuous parameter monitoring system according to the following requirements:

a. The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four successive cycles of operation to have a valid hour of data (or at least two if a calibration check is performed during that hour or if the continuous parameter monitoring system is out-of-control).

[40 C.F.R. 63.1572(c)(2), Subpart UUU]

b. Each CPMS must have valid hourly average data from at least 75 percent of the hours during which the process operated.

[40 C.F.R. 63.1572(c)(3), Subpart UUU]

c. Each CPMS must determine and record the hourly average of all recorded readings and if applicable, the daily average of all recorded readings for each operating day. The daily average must cover a 24-hour period if operation is continuous or the number of hours of operation per day if operation is not continuous.

[40 C.F.R. 63.1572(c)(4), Subpart UUU]

d. Each CPMS must record the results of each inspection, calibration, and validation check.

[40 C.F.R. 63.1572(c)(5), Subpart UUU]

146.4. Monitor and collect data according to the following requirements:

a. 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.

b. 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]

NESHAPS Subpart UUU Recordkeeping Requirements

147. The Permittee shall keep the records as follows:

[18 AAC 50.040(c)(21) & (j)(4) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(ii) & (c)(6)]

147.1. During the period between the compliance date specified for the affected source and the date upon which continuous monitoring systems have been installed and validated and any applicable operating limits have been set, the Permittee must maintain a log that documents the procedures used to minimize emissions from process and emissions control equipment according to the general duty in Condition 141.

[40 C.F.R. 63.1570(d), Subpart UUU]

147.2. Keep the following records, as specified in Conditions 147.2.a through 147.2.c:

a. A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or NOCS that you submitted, according to the requirements in 40 C.F.R. 63.10(b)(2)(xiv).

b. The records specified in 40 C.F.R. 63.1576(a)(2)(i) through (iv), as follows:

(i) Record the date, time, and duration of each startup and/or shutdown period for which the facility elected to comply with the alternative standards in §63.1568(a)(4)(ii) or (iii).

(ii) In the event that an affected unit fails to meet an applicable standard, record the number of failures. For each failure record the date, time and duration of each failure.

(iii) For each failure to meet an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

(iv) Record actions taken to minimize emissions in accordance with Condition 141.2 and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

c. Records of performance tests, performance evaluations, and opacity and visible emission observations as required in 40 C.F.R. 63.10(b)(2)(viii).

[40 C.F.R. 63.1576(a), Subpart UUU]

147.3. For each CEMS, keep the following records:

a. Records described in 40 C.F.R. 63.10(b)(2)(vi) through (xi).

b. The performance evaluation plan as described in §63.8(d)(2) for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. The program of corrective action should be included in the plan required under §63.8(d)(2).

c. 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).

d. 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.

[40 C.F.R. 63.1576(b)(1) & (3) - (5), Subpart UUU]

147.4. Keep the records in 40 C.F.R. 63.6(h) for visible emission observations.

[40 C.F.R. 63.1576(c), Subpart UUU]

147.5. 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.

[40 C.F.R. 63.1576(d), Subpart UUU]

147.6. 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.

[40 C.F.R. 63.1576(e), Subpart UUU]

147.7. Keep the records of any changes that affect emission control system performance.

[40 C.F.R. 63.1576(f), Subpart UUU]

147.8. Records must be in a form suitable and readily available for expeditious review according to 40 C.F.R. 63.10(b)(1).

[40 C.F.R. 63.1576(g), Subpart UUU]

147.9. 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.

[40 C.F.R. 63.1576(h), Subpart UUU]

147.10. 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.

[40 C.F.R. 63.1576(i), Subpart UUU]

NESHAPS Subpart UUU Notification and Reporting Requirements

148. Notifications. The Permittee shall comply with the following requirements for notifications:

[18 AAC 50.040(c)(21) & (j)(4) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

148.1. Except as allowed in Conditions 148.1.a through 148.1.c, the Permittee shall 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.

a. Submit the notification of your intention to construct or reconstruct according to §63.9(b)(5).

b. Submit the notification of intent to conduct a performance test required in §63.7(b) at least 30 calendar days before the performance test is scheduled to begin (instead of 60 days).

c. If you are required to conduct an initial performance test, performance evaluation, design evaluation, opacity observation, visible emission observation, or other initial compliance demonstration, you must submit a NOCS according to §63.9(h)(2)(ii) and as specified in 40 C.F.R. 63.1574(a)(3).

[40 C.F.R. 63.1574(a)(1) – (3), Subpart UUU]

148.2. If you startup a new or reconstructed affected source on or after April 11, 2002, you must submit the initial notification no later than 120 days after you become subject to this subpart, and include the information in Table 42 of this subpart in your NOCS.

[40 C.F.R. 63.1574(c) & (d), Subpart UUU]

149. Compliance Reports. The Permittee shall submit a compliance report to the EPA and to the Department no later than the established submittal date for each operating report required by Condition 205.

[18 AAC 50.040(c)(21) & (j)(4) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]
[40 C.F.R. 63.1575(b)(5), Subpart UUU]

149.1. 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 in Conditions 142 and 143 and there are no deviations from the requirements for work practice standards in Condition 144, a statement that there were no deviations from the emission limitations or work practice standards during the reporting period and that no CEMS was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted;

e. If there is a deviation from any emission limitation or work practice standard Conditions 142 through 144 where a CEMS is not used to comply with the emission limitation or work practice standard during the reporting period, the report must contain the information in Conditions 149.1.a through 149.1.c and Conditions 149.3 through 149.4; and

f. The performance test and performance evaluation results information, as required in Conditions 150.1.b, 150.1.c, and 150.2.

g. If applicable, any requested change in the applicability of an emission standard (e.g., changing from the HCl concentration standard to percent reduction for catalytic reforming units) in the compliance report. Include all information and data necessary to demonstrate compliance with the new emission standard selected and any other associated requirements

[40 C.F.R. 63.1575(a), (c)(1) – (4), (f), & (k), and Table 43, Subpart UUU]

149.2. The Permittee must report the following deviations from the emission limitations and work practice standards in Conditions 142 through 144, according to the requirements in Conditions 149.3 and 149.4:

a. Each instance in which each emission limitation and each operating limit in this subpart that applies is not met; this includes periods of startup, shutdown, and malfunction.

b. Each instance in which the applicable work practice standards are not met.

[40 C.F.R. 63.1570(f), Subpart UUU]

149.3. 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 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).

d. The applicable operating limit or work practice standard that was deviated and either the parameter monitor reading during the deviation or a description of how the work practice standard was deviated.

[40 C.F.R. 63.1575(d), Subpart UUU]

149.4. 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 information required in Conditions 149.1.a through 149.1.c and 149.3.a through 149.3.c.

b. The date and time that each continuous emission monitoring system (CEMS) was inoperative, except for zero (low-level) and high-level checks.

c. The date and time that each CEMS was out-of-control, including the information in 40 C.F.R. 63.8(c)(8).

d. An estimate of the quantity of each regulated pollutant emitted over the emission limit during the deviation, and a description of the method used to estimate the emissions.

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 CEMS 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 CEMS 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 CEMS.

m. A description of any change in the CEMS, processes, or controls since the last reporting period.

[40 C.F.R. 63.1575(e), Subpart UUU]

149.5. The Permittee may submit reports required by other regulations in place of or as part of the compliance report if they contain the required information.

[40 C.F.R. 63.1575(g), Subpart UUU]

150. Performance Test and CEMS Performance Evaluation Reports. The Permittee shall submit to the Administrator results of performance test and CEMS performance evaluation data conducted on and after February 1, 2016, as follows:

[18 AAC 50.040(c)(21) & (j)(4) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]
[40 C.F.R. 63.1575(f) & (k) and Table 43, Subpart UUU]

150.1. For data collected using test methods and performance evaluations of CMS measuring relative accuracy test audit (RATA) pollutants supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert) at the time of the test, the Permittee must submit the results in accordance with

Condition 150.1.a by the submittal date of the compliance report required in Condition 149.

a. Within 60 days after the date of completing each performance test required in Conditions 145.2.b(i) and 148.1.c and each CEMS performance evaluation required by 40 C.F.R. 63.1571(a) and (b), submit the results of the performance test and CEMS performance evaluation electronically to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI)[73], and as follows:

   (i) Submit performance test data and performance evaluation data in a file format generated through use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site.

   (ii) If claiming that some of the performance test information or some of the performance evaluation information being submitted is confidential business information (CBI), submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The electronic storage media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in Condition 150.1.

[40 C.F.R. 63.1575(f)(1), (k)(1)(i), & (k)(2)(i), Subpart UUU]

b. For performance test, instead of including a copy of the test report in the compliance report, the Permittee must include the following in the compliance report required in Condition 149:

   (i) the process unit(s) tested;

   (ii) the pollutant(s) tested; and

   (iii) the date that such performance test was conducted.

c. For CMS performance evaluation, include in the compliance report required in Condition 149:

   (i) the process unit where the CMS is installed;

   (ii) the parameter measured by the CMS; and

   (iii) the date that the performance evaluation was conducted.

[73] CEDRI is accessed through the EPA's Central Data Exchange (CDX).

[40 C.F.R. 63.1575(f)(1), Subpart UUU]

150.2. For all other performance test and performance evaluation results that are not supported by EPA's ERT, results of the performance test or performance evaluation of a CMS done during the reporting period on any affected unit must be included in the compliance report required in Condition 149. Submit the results to the EPA at the appropriate address listed in 40 C.F.R. 63.13. The report must include:

a. For each test method used for a particular kind of emission point tested, a copy of the complete report that contains:

(i) a brief process description;

(ii) a simplified flow diagram showing affected processes,

(iii) control equipment, and sampling point locations;

(iv) sampling site data;

(v) description of sampling and analysis procedures and any modifications to standard procedures;

(vi) quality assurance procedures;

(vii) records of operating conditions during the test, preparation of standards, and calibrations;

(viii) raw data sheets for field sampling and field and laboratory analyses;

(ix) documentation of calculations; and

(x) any other information required by the test method.

b. For additional tests performed for a similar emission point using the same method, submit the results and any other information required, but a complete test report is not required.

[40 C.F.R. 63.1575(f)(1), (k)(1)(ii), & (k)(2)(ii), Subpart UUU]

151. Extensions to Electronic Reporting Deadlines. For reports required to be submitted electronically through the CEDRI in the EPA's CDX:

151.1. If due to a planned or actual outage of either the EPA's CEDRI or CDX systems within the period of time beginning 5 business days prior to the date that the submission is due, the Permittee will be or are precluded from accessing CEDRI or CDX and submitting a required report within the time prescribed, the Permittee may assert a claim of EPA system outage for failure to timely comply with the reporting requirement.

151.2. If a force majeure[74] event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning 5 business days prior to the date the submission is due, the Permittee may assert a claim of force majeure for failure to timely comply with the reporting requirement.

151.3. To assert a a claim of EPA system outage for failure to timely comply with the reporting requirement or claim of force majeure, submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting.

a. Provide to the Administrator the following:

(i) a written description identifying the date(s) and time(s) the CDX or CEDRI were unavailable when the Permittee attempted to access it in the 5 business days prior to the submission deadline and a rationale for attributing the delay in reporting beyond the regulatory deadline to the EPA system outage;

(ii) a written description of the force majeure event and a rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(iii) describe the measures taken or to be taken to minimize the delay in reporting; and

(iv) identify a date by which the Permittee proposes to report, or if the Permittee has already met the reporting requirement at the time of the notification, the date reported.

151.4. In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

151.5. The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

[40 C.F.R. 63.1575(l)(1) & (2), Subpart UUU]

NESHAP Subpart ZZZZ[75] – Stationary Reciprocating Internal Combustion Engines (RICE)

152. NESHAP Subpart ZZZZ Applicability. For EU IDs 34 – 37, 39 – 41, and 121 *[EG-704, EG-801, P-605A, P-605B, P-708B, P-708C, P-719C, EG-705, and EG-1425]* listed in Table A, the

[74] For the purposes of NESHAP Subpart UUU, a *force majeure event* is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents the Permittee from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage).

75 The provisions of NESHAP Subpart ZZZZ listed in Conditions 125.4 and 152 through 159 are current as amended through August 10, 2022. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

Permittee shall comply with applicable requirements for existing[76] and new[77] stationary compression ignition (CI) RICE and stationary spark ignition (SI) RICE located at a major source of hazardous air pollutant (HAP) emissions.

[18 AAC 50.040(c)(23) & (j) and 50.326(j)]
40 C.F.R. 71.6(a)(1)
[40 C.F.R. 63.6585(b) & 63.6590(a) – (c), Subpart ZZZZ]

152.1. For EU IDs 36 and 37, existing non-emergency 4SRB stationary SI RICE, the Permittee shall at all times comply with Conditions 153 through 154 and 157 through 159.

[40 63.6590(a)(1)(i) & 63.6605(a), Subpart ZZZZ]

152.2. For EU ID 39 and 41, existing emergency stationary RICE with a site rating of less than 500 brake Hp, the Permittee shall at all times comply with Conditions 153, 155, and 157 through 159.

[40 63.6590(a)(1)(ii) & 63.6605(a), Subpart ZZZZ]

152.3. For EU IDs 34, 35, and 40, existing emergency stationary CI RICE with a site rating of more than 500 brake HP, the Permittee does not have to meet the requirements of 40 C.F.R. 63 Subpart ZZZZ and Subpart A, including initial notification requirements.

[40 C.F.R. 63.6590(a)(1)(i) & (b)(3)(iii), Subpart ZZZZ]

152.4. For EU ID 121, a new stationary 4SRB SI RICE unit with a site rating of less than or equal to 500 brake Hp, the Permittee shall meet the requirements of 40 C.F.R. 63 Subpart ZZZZ by meeting the requirements of 40 C.F.R. 60 Subpart JJJJ in Conditions 98 through 103 and no further requirements apply for such engine under 40 C.F.R. 63.

[40 63.6590(a)(2)(ii) & (c)(4), Subpart ZZZZ]

153. NESHAP Subpart ZZZZ GAPCP, Operation and Maintenance Requirements. The Permittee shall comply with the following:

[18 AAC 50.040(c)(23) & (j) and 50.326(j)]
40 C.F.R. 71.6(a)(1)
[40 C.F.R. 63.6605, 63.6625, & 63.6640, Subpart ZZZZ]

153.1. At all times, operate and maintain EU IDs 36, 37, 39, and 41, including any 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 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

[76] In accordance with 40 C.F.R. 6590(a)(1)(i) and (ii), a stationary RICE located at a major source of HAP emissions is *existing* if you commenced construction or reconstruction before December 19, 2002 for stationary RICE with a site rating of more than 500 bHp and before June 12, 2006 for stationary RICE with a site rating of less than or equal to 500 bHp.

[77] In accordance with 40 C.F.R. 6590(a)(2)(ii), a stationary RICE located at a major source of HAP emissions is *new* if you commenced construction or reconstruction of a stationary RICE with a site rating of less than or equal to 500 bHp on or after June 12, 2006.

include, but not limited to monitoring results, review of operation, maintenance procedures and records, and inspection of EU IDs 36, 37, 39, and 41.

[40 C.F.R. 63.6605(b), Subpart ZZZZ]

153.2. For EU IDs 39 and 41, the Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to either

a. the manufacturer's emission related written operation and maintenance instructions; or

b. a maintenance plan developed by the Permittee 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)(2), 63.6640(a) & Table 6 (item 9), Subpart ZZZZ]

153.3. For EU IDs 36, 37, 39, and 41, minimize the engine's time spent at idle during startup 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 (in Condition 154.1, for EU IDs 36 and 37) apply.[78]

[40 C.F.R. 63.6625(h), Tables 1a (item1.a) & 2c (item 1), Subpart ZZZZ]

154. NESHAP Subpart ZZZZ Emissions and Operating Limitations. For EU IDs 36 and 37, existing non-emergency 4SRB stationary RICE, the Permittee shall comply with the following:

[18 AAC 50.040(c)(23) & (j); 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

154.1. Except during periods of startup, the Permittee shall meet the emission limitations at 100 percent load plus or minus 10 percent in Condition 154.1.a, and the operating limitations in Condition 154.1.b and 154.1.c:

a. Reduce formaldehyde emissions from EU IDs 36 and 37 by 76 percent or more using non-selective catalytic reduction (NSCR).[79]

b. Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test required in Condition 156.1.a, or during the performance test conducted under Condition 157.1.b; and

c. 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

[78] The Permittee can petition the Administrator pursuant to the requirements of 40 C.F.R. 63.6(g) for alternative work practices. [Ref. Table 1a (note 1), Subpart ZZZZ]

[79] The Permittee notified EPA through a letter dated August 27, 2012 that it elects to comply with the formaldehyde emissions reduction limit in Condition 154.1.a. As such, the Permittee does not need to perform subsequent performance tests to demonstrate compliance with the formaldehyde concentration limit shown in Table 1a (item 1.b) to Subpart ZZZZ.

1250°F. The Permittee can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

154.2. During periods of startup, the Permittee shall comply with Condition 153.3.

[40 C.F.R. 63.6600(a) and Table 1a & Table 1b (item 1), Subpart ZZZZ]

155. NESHAP Subpart ZZZZ Work and Management Practices Standards. For EU IDs 39 and 41, existing emergency stationary RICE, the Permittee shall comply with the following work and management practices:

[18 AAC 50.040(c)(23) & (j); 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (3)(i)]

155.1. Except during periods of startup, the Permittee shall meet the following requirements:

a. Change oil and filter every 500 hours of operation or annually, whichever comes first, except as allowed by Condition 155.3;

b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; 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. 63.6602 & Table 2c (items 1 & 6), Subpart ZZZZ]

155.2. During periods of startup, the Permittee shall comply with Condition 153.3.

[40 C.F.R. 63.6602, 6.6625(h), & Table 2c (item 1), Subpart ZZZZ]

155.3. The Permittee has the option to utilize an oil analysis program in order to extend the specified oil change requirement in Condition 155.1.a, as described below:

a. The oil analysis must be performed at the same frequency specified for changing the oil in 155.1.a.

b. The analysis program must, at a minimum, analyze the following three parameters:

(i) For EU ID 39, stationary CI engine: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows:

(A) Total Base Number is less than 30 percent of the Total Base Number of the oil when new;

(B) viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or

(C) percent water content (by volume) is greater than 0.5.

(ii) For EU ID 41, stationary SI engine: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows:

(A) Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new;

(B) viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or

(C) percent water content (by volume) is greater than 0.5.

c. If all of the condemning limits in Conditions 43.4.b(i) through 43.4.b(iii) are not exceeded, the Permittee is not required to change the oil.

d. If any of the limits in Conditions 155.3.b(i) and 155.3.b(ii) is exceeded, the Permittee must change the oil within 2 business days of receiving the results of the analysis.

(i) If the engine is not in operation when the results of the analysis are received, the Permittee must change the oil within 2 business days or before commencing operation, whichever is later.

e. The analysis program must be part of the maintenance plan for the engine.

[40 C.F.R. 63.6625(i) &(j) and Table 2c (Footnote 2), Subpart ZZZZ]

156. NESHAP Subpart ZZZZ Performance Test Requirements. For the existing non-emergency 4SRB stationary SI RICE, EU IDs 36 and 37, the Permittee shall conduct performance tests following the appropriate procedures described in 40 C.F.R. 63.6620 and Table 4 to Subpart ZZZZ to demonstrate initial compliance with the emissions limit in Condition 154.1.a, as follows:

[18 AAC 50.040(a)(2)(PP) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i)]
[40 C.F.R. 63.6620(a), (b), (d) & (e), and Table 4 (items 2 & 3), Subpart ZZZZ]

156.1. Conduct the initial performance tests no later than the compliance due date provided in 40 C.F.R. 63.6610(a) and according to the provisions in §63.7(a)(2).[80]

a. During the initial performance test, record the catalyst pressure drop and catalyst inlet temperature and establish each operating limitation to demonstrate compliance with Conditions 154.1.b and 154.1.c.

b. If complying with the formaldehyde emissions reduction in Condition 154.1.a the Permittee can demonstrate initial compliance by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 (item 2.a) to Subpart ZZZZ. The average reduction

[80] Initial performance tests on EU IDs 36 and 37 conducted on November 27-28, 2007 demonstrated compliance with the emissions limit in Conditions 154.1.a and the operating limitations in Condition 154.1.b and 154.1.c.

of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

[40 C.F.R. 63.6610(a), 63.6630(b) & (d), Table 4 (items 2 & 3), and Table 5 (item 7), Subpart ZZZZ]

156.2. If EU IDs 36 and 37 are non-operational, the Permittee does not need to start up the engine solely to conduct the performance test. The Permittee can conduct the performance test when the engine is started up again.

156.3. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[40 C.F.R. 63.6620(b)(1), Table 3 (item 3 & footnote 1), and Table 4 ((item 3), Subpart ZZZZ]

156.4. The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. Include in the notification of compliance status (NOCS) a written report of the average percent load determination as specified in Condition 159.1.b(i).

[40 C.F.R. 63.6620(i), Subpart ZZZZ]

156.5. Conduct three separate test runs for each performance test, as specified in §63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

[40 C.F.R. 63.6620(d), Subpart ZZZZ]

156.6. Compliance with the numerical emission limitations in Condition 154.1.a is based on the results of testing the average of three 1-hour runs.

[40 C.F.R. 63.6600, Subpart ZZZZ]

156.7. Use the procedures and equations in 40 C.F.R. 60.6620(e) accordingly to determine compliance with the emissions limits in Conditions 154.1.a.

[40 C.F.R. 63.6620(e)(1) & (2), Subpart ZZZZ]

157. NESHAP Subpart ZZZZ Monitoring. The Permittee shall monitor compliance with emissions and operating limitations, work and management practices standards in Conditions 154 and 155, as follows:

[18 AAC 50.040(a)(2)(PP) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i)]

157.1. For the existing non-emergency 4SRB stationary SI RICE, EU IDs 36 and 37:

a. Except for monitor malfunctions[81], associated repairs, and required quality assurance or control activities, monitor continuously at all times that the stationary RICE is operating. 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

[81] A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. [Ref. 40 CFR 63.6635(b)]

operating levels. However, use all the valid data collected during all other periods.

[40 C.F.R. 63.6635(a) - (c), Subpart ZZZZ]

b. If the Permittee changes the catalyst on EU IDs 36 or 37, the Permittee shall:

(i) reestablish the values of the operating parameters measured during the initial performance test;

(ii) when reestablishing the values of the operating parameters, conduct a performance test according to Condition 156, to demonstrate that the required formaldehyde emissions percent reduction in Condition 154.1.a or the formaldehyde concentration limit shown in Table 1a (item 1.b) is met.

[40 C.F.R. 63.6640(b), Subpart ZZZZ]

c. When complying with formaldehyde reduction in Condition 154.1.a using NSCR, demonstrate compliance by:

(i) installing, operating, and maintaining a continuous parameter monitoring system (CPMS) according to the requirements in 40 C.F.R. 63.6625(b)(1) through (6);

(ii) collecting the catalyst inlet temperature data, to monitor compliance with the operating limitations in Condition 154.1.b, using the CPMS required in Condition 157.1.c(i);

(iii) reducing these data to 4-hour rolling averages;

(iv) maintaining the 4-hour rolling averages within the operating limitations in Condition 154.1.b during the performance test; and

(v) measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation of Condition 154.1.b established during the initial performance test required in Condition 156.1.a, or during the performance test conducted under Condition 157.1.b.

[40 C.F.R. 63.6625(b)(1) - (6), 63.6640(a), Table 5 (item 7), & Table 6 (item 4), Subpart ZZZZ]

157.2. For the existing emergency stationary CI RICE, EU IDs 39 and 41:

a. Demonstrate continuous compliance with the requirements in Conditions 155.1 and 155.2 by complying with Conditions 153.2.

[40 C.F.R. 63.6640(a) & Table 6 (item 9), Subpart ZZZZ]

b. If EU IDs 39 and 41 are operating during an emergency and it is not possible to shut down the engines in order to perform the work practice requirements on the schedule required under Condition 155.1, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed

until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated.

[40 C.F.R. 63.6602 & Table 2c (items 1 & 6 and Footnote 1), Subpart ZZZZ]

c. Comply with the following requirements for emergency stationary RICE under Subpart ZZZZ:

(i) Install a non-resettable hour meter if one is not already installed. Monitor the operating time using the non-resettable hour meter.

[40 C.F.R. 63.6625(f), Subpart ZZZZ]

(ii) Operate according to the requirements of Condition 157.2.c(ii)(A) through 157.2.c(ii)(C). In order for the engine to be considered an emergency stationary RICE, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in Conditions 157.2.c(ii)(A) through 157.2.c(ii)(C), is prohibited. If you do not operate the engine according to the requirements in Conditions 157.2.c(ii)(A) through 157.2.c(ii)(C), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(A) There is no time limit on the use of EU IDs 39 and 41 in emergency situations.

(B) The Permittee may operate EU IDs 39 and 41 for the purpose specified in Condition 157.2.c(ii)(B)(1) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 157.2.c(ii)(C) counts as part of the 100 hours per calendar year allowed by this condition.

(1) Emergency stationary RICE 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 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 RICE beyond 100 hours per calendar year.

(C) The Permittee may operate each of EU IDs 39 and 41 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 provided in Condition 157.2.c(ii)(B). 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 supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[40 C.F.R. 63.6640(f)(1), (2), (2)(i) & (3), Subpart ZZZZ]

158. NESHAP Subpart ZZZZ Recordkeeping Requirements. The Permittee shall keep records of EU IDs 36, 37, 39, and 41, as follows:

[18 AAC 50.040(a)(2)(PP) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii)]

158.1. For the existing non-emergency 4SRB stationary SI RICE, EU IDs 36 and 37, keep records of the following:

a. The records required in Condition 156.4 to determine the engine percent load during the performance test conducted under Condition 156.

[40 C.F.R. 63.6620(i), Subpart ZZZZ]

b. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or NOCS submitted, according to the requirement in 40 C.F.R. 63.10(b)(2)(xiv);

c. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment;

d. Records of performance tests and performance evaluations as required in 40 C.F.R. 63.10(b)(2)(viii);

e. Records of all required maintenance performed on the air pollution control and monitoring equipment; and

f. Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition 153.1, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation;

[40 C.F.R. 63.6655(a)(1) – (5), Subpart ZZZZ]

g. 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.

[40 C.F.R. 63.6655(b)(i) – (3), Subpart ZZZZ]

h. Records of the data required in Conditions 156.1.a and 157.1.c.

[40 C.F.R. 63.6655(d), Table 5 (item 7.a.iii), and Table 6 (item 4.a.i-iv), Subpart ZZZZ]

158.2. For the existing emergency stationary CI RICE, EU IDs 39 and 41, keep records of the following:

a. Keep records of the maintenance conducted on the stationary RICE, EU IDs 39 and 41, to demonstrate that the Permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to its own maintenance plan if electing to comply with Condition 153.2.b, including, but not limited to, the parameters analyzed, the results of the oil analysis, and the oil changes for the engine as part of the oil analysis program described in Condition 155.3.

[40 C.F.R. 63.6655(e)(2) & 63.6625(i) & (j), Subpart ZZZZ]

b. Hours of operation recorded through the non-resettable hour meter, 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)(1), Subpart ZZZZ]

158.3. Keep records in a form suitable and readily available for expeditious inspection and review, readily accessible in hard copy or electronic form, and for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. 63.10(b)(1).

[40 C.F.R. 63.6660(a) - (c), 63.6665, and Table 8, Subpart ZZZZ]
[40 C.F.R. 63.10(b)(1), Subpart A]

159. NESHAP Subpart ZZZZ Reporting Requirements. The Permittee shall report as follows:

[18 AAC 50.040(c)(23) & (j) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii) and (c)(6)]

159.1. **Notification Requirements.** For EU IDs 36 and 37, the Permitte shall submit 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. If conducting a performance test under Condition 157.1.b submit the following notifications:

[40 C.F.R. 63.6595(c) and 63.6645(a)(3) & (g), Subpart ZZZZ]

a. a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in 40 C.F.R. 63.7(b)(1); and

b. a NOCS according to 40 C.F.R. 63.9(h)(2)(ii). Include with the NOCS the following:

(i) a written report of the average percent load determination, as recorded in Condition 158.1.a, including the following information: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided; and

(ii) for each initial compliance demonstration required in Table 5 to Subpart ZZZZ that includes a performance test conducted according to the requirements in Table 3 to Subpart ZZZZ, the performance test results, before the close of business on the 60th day following the completion of the performance test according to 40 C.F.R. 63.10(d)(2).

[40 C.F.R. 63.6620(i), 63.6630(c), and 63.6645(a)(3), (g), & (h)(2), Subpart ZZZZ]

159.2. For the existing non-emergency 4SRB stationary SI RICE, EU IDs 36 and 37, include the semiannual compliance report required under Subpart ZZZZ in the operating report required by Condition 205, as follows:

a. 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 there is 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 153.1, including actions taken to correct a malfunction.

(v) If there are no deviations from the applicable emission or operating limitations under Condition 154, 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 40 C.F.R. 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

b. For each deviation from an emission or operating limitation occurring for either EU ID 36 or 37 where a CMS is used to comply with the emission and operating limitations under Condition 154, include information in Conditions 159.2.a(i) through 159.2.a(iv) and the following:

(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 40 C.F.R. 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 (formaldehyde) that was monitored at the stationary RICE.

(ix) A brief description of the stationary RICE.

(x) A brief description of the CMS.

(xi) The date of the latest CMS certification or audit.

(xii) A description of any changes in CMS, processes, or controls since the last reporting period

c. Report all deviations as defined in 40 C.F.R. 63.6675 in the semiannual monitoring report required by Condition 205. If the Permittee submits a Compliance report pursuant to Condition 159.2.a along with, or as part of, the semiannual monitoring report required by Condition 205, 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.

[40 C.F.R. 63.6640(b), 63.6650(a), (b)(1) & (3) - (5), (c), (e), & (f) and Table 7 (item 1), Subpart ZZZZ]

159.3. For the existing emergency stationary CI RICE, EU IDs 39 and 41, include in the operating report required by Condition 205 a semiannual compliance report of the following:

a. a report of any Subpart ZZZZ deviations as defined in 40 C.F.R. 63.6675 and of each instance in which an applicable requirement in 40 C.F.R. 63, Subpart A (Table 8 to Subpart ZZZZ) was not met;

[40 C.F.R. 63.6640(e) and 63.6650(f), Subpart ZZZZ]

b. records of the operational hours of each of EU IDs 39 and 41 and the reason the engine was in operation as required in Condition 158.2.b for the period covered by the report.

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

159.4. Notify the Department in accordance with Condition 204 if any of the requirements in Conditions 152 through 159 were not met.

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

NESHAP Subpart DDDDD - Industrial, Commercial, and Institutional Boilers and Process Heaters

160. Work Practice Standards. For EU IDs 1 – 12, 15 – 20, 22 – 24, 26 – 31, 115, 116, and 119 *[H-101A, H401B, H-201, H-202, H-203, H-204, H-205, H-401, H-402, H-403N, H-404, H-609, H-701, H-702, H-704, H-801, H-802, H-1001, H-1102, H-1103, H-1104, H-1106, H-1201/1203, H-1202, H-1701, E-1400, E-1410, H-1601, H-1602, and H-1801]*[82] listed in Table A, the Permittee shall, at all times the affected unit is operating, comply with the applicable work practice standards, as follows:

[18 AAC 50.040(c)(37)]
[40 C.F.R. 63 Subpart DDDDD]

160.1. Operate and maintain any affected emission unit, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that 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 emission unit;

[82] EU ID 14 *[H-650, Asphalt Plant Heater]* and the East RTO Air Heater were listed as affected units in the initial notification submitted by the Permittee to EPA on January 24, 2012. However, they are not included in this permit as these units were shut down prior to the Subpart DDDDD compliance due date of January 31, 2016. Should the Permittee restart EU ID 14 and the East RTO Air Heater, the Permittee shall conduct the required initial compliance demonstration for these units and submit an appropriate Notification of Compliance Status (NOCS) and an application for a minor permit revision incorporating the applicable Subpart DDDDD requirements.

[40 C.F.R. 63.7500(a)(3) and 63.7505(a), Subpart DDDDD]

160.2. Complete tune-ups for the following boilers and process heaters:

a. For boilers and process heaters with heat input capacity of 10 MMBtu/hr or greater, EU IDs 1 – 12, 15, 16, 18 – 20, 27 – 31, 115, 116, and 119 *[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-701, H-702, H-801, H-802, H-1001, H-1201/1203, H-1202, H-1701, E-1400, E-1410, H-1601, H-1602, and H-1801]* at least annually, to be conducted no more than 13 months after the previous tune-up, according to the procedures in §63.7540(a)(10)(i) through (vi).

b. For boilers and process heaters with heat input capacity of less than or equal to 5 MMBtu/hr, EU IDs 17, 22 – 24, and 26 *[H-704, H-1102, H-1103, H-1104, and H-1106]* at least once every 5 years, to be conducted no more than 61 months after the previous tune-up according to the procedures in §63.7540(a)(10)(i) through (vi).

[40 C.F.R. 63.7500(a)(1) & (e), 63.7515(d), 63.7540(a)(10)(i)-(vi) & (a)(12) and Table 3, Subpart DDDDD]

160.3. You may delay the burner inspection specified in §63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.

[40 C.F.R. 63.7540(a)(12), Subpart DDDDD]

160.4. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

[40 C.F.R. 63.7540(a)(13), Subpart DDDDD]

161. Notification Requirements. The Permittee shall submit the following notifications, as needed:

161.1. A notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in §63.7575, in the event that a fuel other than natural gas, refinery gas,gaseous fuel subject to another subpart of Part 63, 60, 61. or 65, or other gas 1 fuel is intended to be used during this period. The notification must include the following information:

a. company name and address;

b. identification of the affected unit;

c. reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began;

d. type of alternative fuel that you intend to use; and

e. dates when the alternative fuel use is expected to begin and end.

[40 C.F.R. 63.7545(f), Subpart DDDDD]

161.2. If switching fuels or making a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, provide a notification of the date upon which fuels were switched fuels or physical change was made the within 30 days of the switch/change. The notification must identify:

a. The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice;

b. The currently applicable subcategory under this subpart; and

c. The date upon which the fuel switch or physical change occurred.

[40 C.F.R. 63.7545(h), Subpart DDDDD]

162. Recordkeeping Requirements. The Permittee shall keep records as follows:

162.1. Maintain a copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or NOCS or periodic compliance report submitted according to the requirements in §63.10(b)(2)(xiv).

[40 C.F.R. 63.7555(a)(1), Subpart DDDDD]

162.2. Maintain records of all compliance demonstrations.

[40 C.F.R. 63.7555(a)(2), Subpart DDDDD]

162.3. Maintain records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

[40 C.F.R. 63.7555(h), Subpart DDDDD]

162.4. Maintain on-site the following information for each tune-up conducted:

a. the concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

b. a description of any corrective actions taken as a part of the tune-up; and

c. the type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

[40 C.F.R. 63.7540(a)(10)(vi), Subpart DDDDD]

162.5. Maintain each record for a period of five years in a form suitable and readily available for expeditious review, according to 40 C.F.R. 63.10(b)(1). Keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least two years after the date of each occurrence,

measurement, maintenance, corrective action, report, or record. The Permittee can keep the records off site for the remaining 3 years.

[40 C.F.R. 63.7560, Subpart DDDDD]

163. Reporting Requirements. The Permittee shall report as follows:

163.1. Submit compliance reports in accordance with §63.7550(b).

a. The Permittee may submit the first and subsequent compliance reports according to the dates established in the operating report required under Condition 205.

[40 C.F.R. 63.7550(b)(5), Subpart DDDDD]

b. The annual and 5-year compliance reports for tune-ups required under Conditions 160.2.a and 160.2.b, respectively must cover the applicable one-year or five-year periods from January 1 to December 31.

[40 C.F.R. 63.7550(b)(3), Subpart DDDDD]

c. The report must be postmarked or submitted

(i) no later than January 31 following tune-up completion, or

(ii) if opting to submit compliance report under Condition 163.1.a, by the due date in the operating report required under Condition 205 immediately following tune-up completion.

[40 C.F.R. 63.7550(b)(4) & (5), Subpart DDDDD]

d. The compliance report must contain the following:

(i) company and facility name and address;

(ii) process unit information;

(iii) date of report and beginning and ending dates of the reporting period;

(iv) the date of the most recent tune-up, and the date of the most recent burner inspection if it was not done annually or on a 5-year period, as required in Conditions 160.2.a and 160.2.b, and was delayed until the next scheduled or unscheduled unit shutdown as allowed under Condition 160.3; and

(v) statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

[40 C.F.R. 63.7550(c)(1), (c)(5)(i) - (iii), (xiv) & (xvii), Subpart DDDDD]

163.2. If requested by the Administrator, submit a report containing the information in Condition 162.4.

[40 C.F.R. 63.7540(a)(10)(vi), Subpart DDDDD]

163.3. Report any deviation from Conditions 160 through 163 in accordance with Condition 204.

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

NESHAP Subpart GGGGG – Site Remediation

164. NESHAP Subpart GGGGG Applicability. The Permittee shall conduct site remediation, as defined in 40 C.F.R. 63.7957.[83]

[18 AAC 50.040(c)(24)]
[40 C.F.R. 63.7881(a) - (c), Subpart GGGGG]

164.1. The Permittee is not subject to this subpart if the site remediation qualifies for any of the exemptions listed below:

a. The site remediation only cleans up material that does not contain any of the HAP listed in Table 1 of 40 C.F.R. 63, Subpart GGGGG;

b. The site remediation will be performed under the authority of the Comprehensive Environmental Response and Compensation Liability Act (CERCLA) as a remedial action or a non time-critical removal action; or

c. The site remediation will be performed under a Resource Conservation and Recovery Act (RCRA) corrective action conducted at a treatment, storage and disposal facility (TSDF) that is either required by your permit issued by either the U.S. Environmental Protection Agency (EPA) or a State program authorized by the EPA under RCRA section 3006; required by orders authorized under RCRA; or required by orders authorized under RCRA section 7003.

[40 C.F.R. 63.7881(b)(1) – (b)(3), Subpart GGGGG]

164.2. The site remediation activities are not subject to the requirements of this subpart, except for the recordkeeping requirements in Condition 164.2.b, provided that the Permittee meets the requirements specified below:

a. 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.

b. 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

[83] *Site remediation* means one or more activities or processes used to remove, destroy, degrade, transform, immobilize, or otherwise manage remediation material. The monitoring or measuring of contamination levels in environmental media using wells or by sampling is not considered to be a site remediation.
[40 C.F.R. 63.7957, Subpart GGGGG]

description of your methodology and data used for determining the total HAP content of the remediation.

[40 C.F.R. 63.7881(c)(1 – (c)(2), Subpart GGGGG]

164.3. Submit a copy of the documentation prepared in Condition 164.2.b annually to the Department with the compliance certification required by Condition 206.

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

165. NESHAP Subpart GGGGG, Short Term Remediation. A site remediation that is completed within 30 consecutive calendar days is not subject to the standards specified in 40 C.F.R. 63.7885 through 63.7955, as required 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.

165.1. The 30 consecutive calendar day period for a site remediation that qualifies for this exemption is determined according to actions taken by the Permittee as defined in 40 C.F.R. 63.7884(b)(1)(i) through (iii).

165.2. For the purpose of complying with Condition 165.1, if the Permittee ships or otherwise transfers the remediation material off-site the Permittee must include in the applicable shipping documentation, in addition to any notifications and certifications required under §63.7936, a statement that the shipped material was generated by a site remediation activity subject to the conditions of this exemption. The statement must include the date on which the Permittee initiated the site remediation activity generating the shipped remediation materials, as specified in 40 C.F.R. 63.7884(b)(1)(i) of this section, and the date 30 calendar days following your initiation date.

165.3. 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) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & (c)(6)]
[40 C.F.R. 63.7884(a) & (b), Subpart GGGGG]

165.4. Submit a copy of the documentation prepared in Condition 165.3 to the Department with the compliance certification required by Condition 206.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 C.F.R. Part 61

NESHAP Subpart A – 40 C.F.R. 61 General Provisions

166. The Permittee shall comply with the general requirements set forth under 40 C.F.R. 61.01 through 61.19, as they apply to petroleum refineries subject to 40 C.F.R. 61 Subpart FF for

Benzene Waste Operations (Conditions 167 through 170) and activities at the stationary source subject to 40 C.F.R. 61 Subpart M for Asbestos (Condition 171).

[18 AAC 50.040(b)(1) & (j)(4) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) - (3)]
[40 C.F.R. 61.01 – 61.19, Subpart A]

166.1. **Address.** The Permittee shall submit all requests, reports, applications, submittals, and other communications to the Administrator[84] pursuant to this part in duplicate to the attention of the Director, Office of Air Quality,#Region X, U.S. Environmental Protection Agency, 1200 Sixth Avenue (OAQ-107), Seattle, WA 98101.#If acceptable to both the Administrator and the Permittee, notifications and reports may be submitted on electronic media.

[40 C.F.R. 61.04(a), (b), & (c)(10), Subpart A]

166.2. **Prohibited activities.** After the effective date of any standard, the Permittee shall not:

a. construct or modify any stationary source subject to that standard without first obtaining written approval from the Administrator in accordance with this subpart, except under an exemption granted by the President under section 112(c)(2) of the Act;

b. operate a new stationary source subject to that standard in violation of the standard, except under an exemption granted by the President under section 112(c)(2) of the Act;

c. ninety days after the effective date of any standard, operate any existing source subject to that standard in violation of the standard, except under a waiver granted by the Administrator under this part or under an exemption granted by the President under section 112(c)(2) of the Act; and

d. fail to report, revise reports, or report source test results as required under this part.

[40 C.F.R. 61.05(a) - (d), Subpart A]

166.3. **Construction or modification.** The Permittee shall submit to the Administrator an application for approval of the construction of any new source or modification of any existing source. The application shall be submitted before the construction or modification is planned to commence, or within 30 days after the effective date if the construction or modification had commenced before the effective date and initial startup has not occurred. A separate application shall be submitted for each stationary source.

[84] The Department defines the "the Administrator" to mean "the EPA and the Department." The General Provisions authorities under 40 C.F.R. 61 Subpart A have been delegated by the EPA to the Department (ADEC), except: §§61.04(b); 61.12(d)(1); 61.13(h)(1)(ii) for approval of major alternatives to test methods; §61.14(g)(1)(ii) for approval of major alternatives to monitoring; §61.16; §61.53(c)(4); and any sections in the subparts pertaining to approval of alternative standards (i.e., alternative means of emission limitations), or approval of major alternatives to test methods or monitoring. For definitions of minor, intermediate, and major alternatives or changes to test methods and monitoring, see 40 C.F.R. 63.90. The authority for 40 C.F.R. 61 Subpart FF Benzene Waste Operations has been delegated to the ADEC.

a. Each application for approval of construction shall include:

(i) The name and address of the applicant;

(ii) The location or proposed location of the source;

(iii) Technical information describing the proposed nature, size, design, operating design capacity, and method of operation of the source, including a description of any equipment to be used for control of emissions; such technical information shall include calculations of emission estimates in sufficient detail to permit assessment of the validity of the calculations;

b. Each application for approval of modification shall include, in addition to the information required in Condition 166.3.a, the following:

(i) The precise nature of the proposed changes;

(ii) The productive capacity of the source before and after the changes are completed; and

(iii) Calculations of estimates of emissions before and after the changes are completed, in sufficient detail to permit assessment of the validity of the calculations.

[40 C.F.R. 61.07(a) - (c), Subpart A]

166.4. **Notification of startup.** For each stationary source which has an initial startup after the effective date of a standard, the owner or operator shall furnish the Administrator with written notification as follows:

a. A notification of the anticipated date of initial startup of the source not more than 60 days nor less than 30 days before that date;

b. A notification of the actual date of initial startup of the source within 15 days after that date; and

c. If the Department requires a notice which contains all the information required in the notification in Condition 166.4.a, sending the Administrator a copy of that notification will satisfy Condition 166.4.a of this section.

[40 C.F.R. 61.09(a) & (b), Subpart A]

166.5. **Reporting.** For each existing source or each new source which had an initial startup before the effective date of a standard, the owner or operator shall provide the following information in writing to the Administrator within 90 days after the effective date :

a. Name and address of the owner or operator;

b. The location of the source;

c. The type of hazardous pollutants emitted by the stationary source;

d. A brief description of the nature, size, design, and method of operation of the stationary source including the operating design capacity of the source. Identify each point of emission for each hazardous pollutant;

e. The average weight per month of the hazardous materials being processed by the source, over the last 12 months preceding the date of the report;

f. A description of the existing control equipment for each emission point including:

(i) Each control device for each hazardous pollutant; and

(ii) Estimated control efficiency (percent) for each control device; and

g. A statement by the owner or operator of the source as to whether the source can comply with the standards within 90 days after the effective date.

[40 C.F.R. 61.10(a), Subpart A]

166.6. Any change in the information provided under Conditions 166.5 or 166.3 shall be provided to the Administrator within 30 days after the change. However, if any change will result from modification of the source, Condition 166.3.b and §61.08 apply.

[40 C.F.R. 61.10(c), Subpart A]

166.7. The Permittee may submit reports required under this condition following the format for reporting included as Appendix A of 40 C.F.R. 61. Advice on reporting the status of compliance may be obtained from the Administrator.

[40 C.F.R. 61.10(d), Subpart A]

166.8. The Permittee shall comply with the report postmark deadlines and frequency(ies) in accordance with §§61.10(e) through (j).

[40 C.F.R. 61.10(e) – (j), Subpart A]

166.9. **Waiver of compliance.** The owner or operator of an existing source unable to comply with an applicable standard may request a waiver of compliance with that standard for a period not exceeding 2 years after the effective date. Any request shall be in writing and shall include the information required under 40 C.F.R. 61.10(b)(1) – (3).

a. The Administrator may grant, deny, or terminate a waiver in accordance with the provisions of 40 C.F.R. 61.11.

[40 C.F.R. 61.10(b) and 61.11(a) – (f), Subpart A]

166.10. **Good Air Pollution Control Practice.** The Permittee shall maintain and operate the stationary source, including associated equipment for air pollution control, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating 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 operating and maintenance procedures, and inspection of the source.

[40 C.F.R. 61.12(c), Subpart A]

166.11. **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 167 and 171, nothing in 40 C.F.R. Part 61 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the stationary source would have been in compliance with applicable requirements of 40 C.F.R. Part 61 if the appropriate performance or compliance test or procedure had been performed.

[40 C.F.R. 61.12(e), Subpart A]

166.12. **Emission tests and waiver of emission tests.** If required to do emission testing by an applicable subpart under 40 C.F.R. 61 or if a waiver of emission testing is needed, the Permittee shall comply with the applicable provisions of 40 C.F.R. 61.13.

[40 C.F.R. 61.13, Subpart A]

166.13. **Circumvention.** The Permittee shall not build, erect, install, or use any article, machine, equipment process, or method, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Conditions 167 and 171. Such concealment includes, but is not limited to, the use of gaseous dilutants to achieve compliance with a visible emissions standard, and the piecemeal carrying out of an operation to avoid coverage by a standard that applies only to operations larger than a specified size.

[40 C.F.R. 61.19, Subpart A]

40 C.F.R. Part 61 Subpart FF – Benzene Waste Operations

167. NESHAP Subpart FF Benzene Standards. The Permittee shall limit the total annual benzene quantity from stationary source waste to less than 10 megagrams per year (Mg/yr) (11 ton/yr).[85]

[18 AAC 50.040(b)(2)(E) & (j)(4) and 50.326(j)(4)]
[40 C.F.R. 61.342(a), Subpart FF]
[40 C.F.R. 71.6(a)(1) & (c)(6)]

167.1. The *total annual benzene quantity from facility waste* is the sum of the annual benzene quantity for each waste stream at the facility 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. Specific requirements for calculating the total annual benzene waste quantity are as follows:

[40 C.F.R. 61.342(a)(1) – (4), Subpart FF]

a. 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.

[85] A stationary source with a total annual benzene quantity from facility waste of less than 10 megagrams per year (Mg/yr) (11 ton/yr) is exempt from the requirements of 40 C.F.R. 61.342(b) and (c) of Subpart FF.

b. Include in the calculation of the total annual benzene quantity wastes that are exempted from control under 40 C.F.R. 61.342(c)(2) and 61.342(c)(3) 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.

c. 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.

d. 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.

e. If the Permittee is managing remediation waste generated offsite, include the benzene in this waste in the calculation of total annual benzene quantity in facility waste, provided that the waste streams have an annual average water content greater than 10 percent, or that they are mixed with water or other wastes at any time and the mixture has an annual average water content greater than 10 percent.

f. 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.

167.2. Determine compliance with the requirements of this Condition 167 by review of the stationary source's records and results from tests and inspections using methods and procedures specified in Condition 168.

[40 C.F.R. 61.342(g), Subpart FF]

167.3. 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 168.1, the Permittee shall comply with all applicable requirements under 40 C.F.R. 61.342 through 61.357.

[40 C.F.R. 61.342 – 61.357, Subpart FF]
[40 C.F.R. 71.6(c)(6)]

168. Monitoring. The Permittee shall monitor benzene quantity from the stationary source waste, as follows:

[18 AAC 50.040(b)(2)(E) & (j)(4) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(i)]

168.1. Determine the *total annual benzene quantity* from stationary source waste by the following procedure:

[40 C.F.R. 61.355(a), Subpart FF]

a. 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 167.1, the Permittee shall:

(i) Determine the *annual waste quantity* for each waste stream using the procedures specified in Condition 168.2.

(ii) Determine the *flow-weighted annual average benzene* concentration for each waste stream using the procedures specified in Condition 168.3.

(iii) 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.

[40 C.F.R. 61.355(a)(1)(i) – (iii), Subpart FF]

b. 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 168.2.d.

[40 C.F.R. 61.355(a)(2), Subpart FF]

c. Comply with the recordkeeping requirements of Condition 169 and reporting requirements of Condition 170.

[40 C.F.R. 61.355(a)(4)(i), Subpart FF]

d. 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.

[40 C.F.R. 61.355(a)(4)(ii), Subpart FF]

e. 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

(i) as provided for process unit turnaround waste in Condition 168.2.d, 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 168.1 through 168.3; the benzene quantity in this waste stream shall not be annualized or averaged over the time interval between the activities that resulted in generation of the waste, for purposes of determining the total annual benzene quantity from facility waste.

[40 C.F.R. 61.355(a)(6), Subpart FF]

168.2. For purposes of the calculation required by Condition 168.1, determine the annual waste quantity at the point of waste generation by one of the methods given in Conditions 168.2.e through 168.2.g, unless otherwise provided in Conditions 168.2.a through 168.2.d.

[40 C.F.R. 61.355(b), Subpart FF]

a. The determination of annual waste quantity for sour water streams that are processed in sour water strippers shall be made at the point that the water exits the sour water stripper.

[40 C.F.R. 61.355(b)(1), Subpart FF]

b. The determination of annual waste quantity for wastes at coke by-product plants subject to and complying with the control requirements of §61.132, 61.133, 61.134, or 61.139 of 40 C.F.R. 61 Subpart L shall be made at the location that the waste stream exits the process unit component or waste management unit controlled by that subpart or at the exit of the ammonia still, provided that the following conditions are met:

(i) The transfer of wastes between units complying with the control requirements of 40 C.F.R. 61 Subpart L, process units, and the ammonia still is made through hard piping or other enclosed system.

(ii) The ammonia still meets the definition of a sour water stripper in §61.341.

[40 C.F.R. 61.355(b)(2), Subpart FF]

c. The determination of annual waste quantity for wastes that are received at hazardous waste treatment, storage, or disposal facilities from offsite shall be made at the point where the waste enters the hazardous waste treatment, storage, or disposal facility.

[40 C.F.R. 61.355(b)(3), Subpart FF]

d. Determine the annual quantity of each process unit turnaround waste generated only at 2-year or greater intervals, by either

(i) 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 168.1.a(iii) for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process turnaround; or

(ii) 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.

[40 C.F.R. 61.355(b)(4), Subpart FF]

e. Select the highest annual quantity of waste managed from historical records representing the most recent 5 years of operation; or

[40 C.F.R. 61.355(b)(5), Subpart FF]

f. Use the maximum design capacity of the waste management unit; or

[40 C.F.R. 61.355(b)(6), Subpart FF]

g. Use measurements that are representative of maximum waste generation rates.

[40 C.F.R. 61.355(b)(7), Subpart FF]

168.3. For purposes of the calculation required by Condition 168.1, determine the *flow-weighted annual average benzene concentration* in a manner that meets the requirements given in Condition 168.3.a using either of the methods given in Conditions 168.3.b and 168.3.c.

a. The determination of flow-weighted annual average benzene concentration shall meet all of the following criteria:

(i) The determination shall be made at the point of waste generation except for the specific cases given in Conditions 168.3.a(i)(A) through 168.3.a(i)(D), as applicable.

(A) The determination for sour water streams that are processed in sour water strippers shall be made at the point that the water exits the sour water stripper.

(B) The determination for wastes at coke by-product plants subject to and complying with the control requirements of §61.132, 61.133, 61.134, or 61.139 of 40 C.F.R. 61 Subpart L shall be made at the location that the waste stream exits the process unit component or waste management unit controlled by that subpart or at the exit of the ammonia still, provided that the following conditions are met:

(1) The transfer of wastes between units complying with the control requirements of subpart L of this part, process units, and the ammonia still is made through hard piping or other enclosed system.

(2) The ammonia still meets the definition of a sour water stripper in §61.341.

(C) The determination for wastes that are received from offsite shall be made at the point where the waste enters the hazardous waste treatment, storage, or disposal facility.

(D) The determination of flow-weighted annual average benzene concentration for process unit turnaround waste shall be made using either of the methods given in paragraph (c)(2) or (c)(3) of this section. The resulting flow-weighted annual average benzene concentration shall be included in the calculation of annual benzene quantity as provided in paragraph (a)(1)(iii) of this section for the year in which the turnaround occurs and for each

subsequent year until the unit undergoes the next process unit turnaround.

(ii) Volatilization of the benzene by exposure to air shall not be used in the determination to reduce the benzene concentration.

(iii) Mixing or diluting the waste stream with other wastes or other materials shall not be used in the determination—to reduce the benzene concentration.

(iv) The determination shall be made prior to any treatment of the waste that removes benzene, except as specified in paragraphs (c)(1)(i)(A) through (D) of this section.

(v) 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.

[40 C.F.R. 61.355(c)(1)(i) – (v), Subpart FF]

b. *Knowledge of the waste.* Provide sufficient information to document the flow-weighted annual average benzene concentration of each waste stream.

(i) 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.

(ii) If test data are used, then the Permittee 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.

(iii) 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 168.3.c shall be used to resolve the disagreement.

[40 C.F.R. 61.355(c)(2), Subpart FF]

c. Measure the benzene concentration in the waste stream in accordance with the following procedures:

[40 C.F.R. 61.355(c)(3), Subpart FF]

(i) 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.

[40 C.F.R. 61.355(c)(3)(i), Subpart FF]

(ii) For waste in enclosed pipes, the following procedures shall be used:

(A) Collect samples prior to the waste being exposed to the atmosphere in order to minimize the loss of benzene prior to sampling.

(B) 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.

(C) Locate the sampling tap within two pipe diameters of the static mixer outlet.

(D) Purge sample lines and cooling coil prior to the initiation of sampling with at least four volumes of waste.

(E) 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.

(F) Collect samples at a flow rate such that the cooling coil is able to maintain a waste temperature less than 10° C (50° F).

(G) After filling, cap the sample container immediately (within 5 seconds) to leave a minimum headspace in the container.

(H) Immediately cool the sample containers and maintain a temperature below 10° C (50° F) for transfer to the laboratory.

(iii) 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.

[40 C.F.R. 61.355(c)(3)(iii), Subpart FF]

(iv) 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): EPA Methods 8020, 8021, 8260, 602, or 624.

[40 C.F.R. 61.355(c)(3)(iv), Subpart FF]

(v) Calculate the flow-weighted annual average benzene concentration by averaging the results of the sample analyses using Equation 14:

Equation 14 $$\overline{C} = \frac{1}{Q_t} \times \sum_{i=1}^{n} (Q_i)(C_i)$$

Where:

$\bar{C}$ = 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).
Q_i = Annual waste quantity for waste stream represented by C_i, kg/yr (lb/yr).
C_i = Measured concentration of benzene in waste sample i, ppmw.

[40 C.F.R. 61.355(c)(3)(v), Subpart FF]

169. Recordkeeping. The Permittee shall maintain records in accordance with Condition 200 in a readily accessible location at the facility site. In addition maintain the following records:

[18 AAC 50.040(b)(2)(E) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii)]
[40 C.F.R. 61.356(a), Subpart FF]

169.1. Records that identify each waste stream at the facility subject to Subpart FF, indicating whether or not the waste stream is controlled for benzene emissions in accordance with Subpart FF;

[40 C.F.R. 61.356(b), Subpart FF]

169.2. For each waste stream not controlled for benzene emission, records of all test results, measurements, calculations, and other documentation used to determine the following information for the waste stream:

a. waste stream identification;

b. water content indicating whether or not the water content of the waste stream is greater than 10 percent;

c. whether or not the waste stream is a process wastewater stream, product tank drawdown, or landfill leachate;

d. annual waste quantity;

e. range of benzene concentrations;

f. annual average flow-weighted benzene concentration; and

g. annual benzene quantity; and

[40 C.F.R. 61.356(b)(1), Subpart FF]

169.3. Where the annual waste quantity for process unit turnaround waste is determined in accordance with Condition 168.2.e, records of all test results, measurements, calculations and other documentation used to determine the following information:

a. identification of each process unit at the facility that undergoes turnarounds;

b. the date of the most recent turnaround for each process unit;

c. identification of each process unit turnaround waste;

d. the water content of each process unit turnaround waste;

e. the annual waste quantity determined in accordance with Condition 168.2.e;

f. the range of benzene concentrations in the waste;

g. the annual average flow-weighted benzene concentration of the waste; and

h. the annual benzene quantity calculated in accordance with Condition 168.1.a(iii).

[40 C.F.R. 61.356(b)(5), Subpart FF]

170. Reporting. On or before April 7 of each calendar year, submit to the Department an annual report as follows:

[18 AAC 50.040(b)(2)(E) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]
[40C.F.R.61.357(a) & (c), Subpart FF]

170.1. A report that includes the following:

a. Total annual benzene quantity from facility waste for the previous calendar year determined in accordance with Condition 168.1; and

b. A table showing the records required under Conditions 169.1 and 169.2.

[40C.F.R.61.357(a)(1) - (3) & (c), Subpart FF]

170.2. The information required in Condition 170.1 shall

a. represent the waste stream characteristics based on current configuration and operating conditions;

b. list only those waste streams that contact materials containing benzene;

c. need not include a description of the controls to be installed to comply with the standard or other information required in Condition 166.5.

[40C.F.R.61.357(a)(4), Subpart FF]

170.3. If the information required under Condition 170.1 has not changed in the most recent update, a statement to that effect may be submitted.

[40C.F.R.61.357(c), Subpart FF]

170.4. 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, the Permittee shall submit

a. a report that includes a summary of the regulatory status of each waste stream subject to 40 C.F.R. 61.342 and is determined by the procedures specified in Condition 168.3 to contain benzene; and

b. updates to the information listed in Conditions 170.1.a and 170.1.b.

[40C.F.R.61.357(a) & (c)]
[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

170.5. Report deviations from Conditions 166 through 169 under Condition 204.

[18 AAC 50.040(j)(4) & 50.326(j)(4)]

[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

40 C.F.R. Part 61 Subpart M – Asbestos

171. 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 (Condition 166) 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]

40 C.F.R. Part 68 – Risk Management Plan (RMP) Requirements

172. 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[86].

[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]

40 C.F.R. Part 82 – Protection of Stratospheric Ozone

173. Subpart F – Refrigerant Recycling, Emissions Reduction, 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]

174. Subpart G – Significant New Alternatives Policy. 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) & 50.326(j)]
[40 C.F.R. 82.174(b) through (d), Subpart G]

175. Subpart H – Halons Emissions Reduction. The Permittee shall comply with the applicable prohibitions set out in 40 C.F.R. 82.270 (Protection of Stratospheric Ozone Subpart H – Halon Emission Reduction).

[18 AAC 50.040(d) & 50.326(j)]
[40 C.F.R. 82.270(b) through (f), Subpart H]

NESHAP Applicability Determinations

176. 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).

176.1. If an owner or operator of a stationary source who is in the relevant source category determines that the source is not subject to a relevant standard or other requirement

[86] As of issuance date of this permit, the most recent RMP was updated and submitted to the EPA on December 15, 2020.

established under 40 C.F.R. 63, the owner or operator must keep a record as specified in 40 C.F.R. 63.10(b)(3).

176.2. If a source becomes affected by an applicable subpart of 40 C.F.R. 63, the owner or operator 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).

176.3. 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 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), 63.9(b), & 63.10(b)(3), Subpart A]

Section 7. General Conditions

Standard Terms and Conditions

177. 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)]

178. 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)]

179. 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)]

180. Administration Fees. The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-403.

[18 AAC 50.326(j)(1), 50.400, & 50.403]
[AS 37.10.052(b) & AS 46.14.240]

181. Assessable Emissions. For each period from July 1 through the following June 30, the Permittee shall pay to the Department an annual emission fee based on the stationary source's assessable emissions, as determined by the Department under 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 the stationary source's

181.1. assessable potential to emit of 2,511 TPY; or

181.2. projected annual rate of emissions, in TPY, based upon actual annual emissions for the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by credible evidence of actual emissions, based upon the most representative information available from 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) & (3), 50.346(b)(1), 50.410, & 50.420]

182. Assessable Emission Estimates. The Permittee shall comply as follows:

182.1. No later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions, as determined in Condition 181.2. Submit actual emissions esimates in accordance with the submission instructions on the Department's Standard Permit Conditions web page at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-condition-i-submission-instructions/.

182.2. The Permittee shall include with the assessable emissions report all the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates.

182.3. If the stationary source has not commenced construction or operation on or before March 31st, the Permittee may submit to the Department's Anchorage office a waiver letter certified under 18 AAC 50.205 that states the stationary source's actual annual emissions for the previous calendar year are zero TPY and provides estimates for when construction and operation will commence.

182.4. If no estimate or waiver letter 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 181.1.

[18 AAC 50.040(j)(4), 50.326(j)(1) & (3), 50.346(b)(1), 50.410, & 50.420]

183. Good Air Pollution Control Practice. The Permittee shall do the following for EU ID(s) 111, 112, and 130:

183.1. Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;

183.2. Keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and

183.3. Keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.326(j)(3) & 50.346(b)(5)]

184. 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)]

185. 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. 326(j)(3), & 50.346(c)]

185.1. 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 185.1.a or to address the results of Department inspections that found potential problems; and

(ii) to prevent future dust problems.

185.2. The Permittee shall report according to Condition 187.3.

186. 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 stationary 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)]

187. 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 50.040(j)(4), 50.110, 50.326(j)(3) & 50.346(a)]
[40 C.F.R. 71.6(a)(3)]

187.1. **Monitoring.** The Permittee shall monitor as follows:

a. 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 187.

b. The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

(i) 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 187; or

(ii) the Department notifies the Permittee that it has found a violation of Condition 187.

187.2. **Recordkeeping.** The Permittee shall keep 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 187; and

d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

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

a. With each stationary source operating report under Condition 205, the Permittee shall include a brief summary report which must include the following for the period covered by the report:

(i) the number of complaints received;

(ii) the number of times the Permittee or the Department found corrective action necessary;

(iii) the number of times action was taken on a complaint within 24 hours; and

(iv) the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.

b. 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, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

c. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 204.

188. Technology-Based Emission Standard. If an unavoidable emergency, malfunction (as defined in 18 AAC 50.235(d)), or non-routine repair (as defined in 18 AAC 50.990(64), causes emissions in excess of a technology-based emission standard[87] listed in Canditions 14 through 17, 66, 81, 82, 106, 108, 173 (refrigerants), the Permittee shall

188.1. take all reasonable steps to minimize levels of emissions that exceed the standard, and

188.2. report in accordance with Condition 204.1.b; the report must include information on the steps taken to mitigate emissions and corrective measures taken or to be taken.

[18 AAC 50.235(a), 50.326(j)(4), & 50.040(j)(4)]
[40 C.F.R. 71.6(c)(6)]

Open Burning Requirements

189. Open Burning. If the Permittee conducts open burning at this stationary source, the Permittee shall comply with the requirements of 18 AAC 50.065. The Permittee shall comply as follows:

189.1. 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; and

[87] As defined in 18 AAC 50.990(106), the term "*technology-based emission standard*" means a best available control technology (BACT) standard; a lowest achievable emission rate (LAER) standard; a maximum achievable control technology (MACT) 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.

189.2. Include this condition in the annual certification required under Condition 206.

[18 AAC 50.065, 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)(3)]

Section 8. General Source Testing and Monitoring Requirements

190. 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)]

191. Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

[18 AAC 50.220(b)]

191.1. at a point or points that characterize the actual discharge into the ambient air; and

191.2. at the maximum rated burning or operating capacity of the emissions unit or another rate determined by the Department to characterize the actual discharge into the ambient air.

192. Reference Test Methods. The Permittee shall use the following test methods when conducting source testing for compliance with this permit:

192.1. 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]

192.2. 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]

192.3. 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]

192.4. 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. The Permittee may use the form in Section 13 to record data.

[18 AAC 50.030 & 50.220(c)(1)(D)]

192.5. 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]

192.6. Source testing for emissions of $PM_{2.5}$ and 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]

192.7. 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)(32) & 50.220(c)(2)]
[40 C.F.R. 63, Appendix A, Method 301]

193. 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 emissions 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)]

194. Test Exemption. The Permittee is not required to comply with Conditions 196, 197 and 198 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.3) or Smoke/No Smoke Plan (Condition 2.4).

[18 AAC 50.345(a)]

195. 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)]

196. Test Plans. Except as provided in Condition 194, 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 emissions 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 190 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 done without resubmitting the plan.

[18 AAC 50.345(a) & (m)]

197. Test Notification. Except as provided in Condition 194, 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)]

198. Test Reports. Except as provided in Condition 194, within 60 days after completing a source test, the Permittee shall submit one certified copy 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 certify the results in the manner set out in Condition 201. 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)]

199. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in Conditions 6 and 13.2, the three-hour average is determined using the average of three one-hour test runs.

[18 AAC 50.220(f)]

Section 9. General Recordkeeping and Reporting Requirements

Recordkeeping Requirements

200. The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

[18 AAC 50.040(a)(1) & 50.326(j)]
[40 C.F.R 60.7(f), Subpart A, 40 C.F.R 71.6(a)(3)(ii)(B)]

200.1. Copies of all reports and certifications submitted pursuant to this section of the permit; and

200.2. 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

201. 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.

201.1. The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if the person providing the electronic signature

a. uses a security procedure, as defined in AS 09.80.190, that the Department has approved; and

b. accepts or agrees to be bound by an electronic record executed or adopted with that signature.

[18 AAC 50.205, 50.326(j)(3), and 50.345(a) & (j)]

202. Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall submit to the Department one certified copy of reports, compliance certifications,

and/or other submittals required by this permit. The Permittee may submit the documents electronically or by hard copy.

202.1. Submit the certified copy of reports, compliance certifications, and/or other submittals in accordance with the submission instructions on the Department's Standard Permit Conditions web page at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-condition-xvii-submission-instructions/.

[18 AAC 50.326(j)(3) & 50.346(b)(10)]

203. 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)]

204. Excess Emissions and Permit Deviation Reports. The Permittee shall report excess emissions and permit deviations as follows:

204.1. Except as provided in Condition 187, 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 commences or is discovered, report

(i) excess 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 nonroutine repair that causes emissions in excess of a technology-based emission standard.

c. If a continuous or recurring excess emissions is not corrected within 48 hours of discovery, report within 72 hours of discovery unless the Department provides written permission to report under Condition 204.1.d.

d. Report all other excess emissions not described in Conditions 204.1.a, 204.1.b, and 204.1.c within 30 days after the end of the month during which the excess emissions occurred or as part of the next routine operating report in Condition 205 for excess emissions that occurred during the period covered by the report, whichever is sooner.

e. If requested by the Department, the Permittee shall provide a more detailed written report to follow up on an excess emissions report.

[18 AAC 50.235(a)(2), 50.240(c), 50.326(j)(3), & 50.346(b)(2)]

204.2. **Permit Deviations Reporting.** For permit deviations that are not "excess emissions," as defined under 18 AAC 50.990:

a. Report according to the required deadline for failure to monitor, as specified in other applicable conditions of this permit (Conditions 4.3.b and 9.4.b).

b. Report all other permit deviations within 30 days after the end of the month during which the deviation occurred or as part of the next routine operating report in Condition 205 for permit deviations that occurred during the period covered by the report, whichever is sooner.

[18 AAC 50.326(j)(3) & 50.346(b)(2)]

204.1. **Notification Form.** When reporting either excess emissions or permit deviations, the Permittee shall report using either the Department's online form, which can be found at the Division of Air Quality's Air Online Services (AOS) system webpage http://dec.alaska.gov/applications/air/airtoolsweb using the Permittee Portal option, or, if the Permittee prefers, the form contained in Section 15 of this permit. The Permittee must provide all information called for by the form that is used. Submit the report in accordance with the submission instructions on the Department's Standard Permit Conditions webpage found at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-iii-and-iv-submission-instructions/.

[18 AAC 50.235(a)(2), 50.240(c), 50.326(j)(3), & 50.346(b)(2) & (3)]

205. Operating Reports. During the life of this permit[88], the Permittee shall submit to the Department an operating report in accordance with Condition 202 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.

205.1. The operating report must include all information required to be in operating reports by other conditions of this permit, for the period covered by the report.

205.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 205.1, the Permittee shall identify

a. the date of the excess emissions or permit 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

[88] *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.

205.3. when excess emissions or permit deviations have already been reported under Condition 204 the Permittee shall cite the date or dates of those reports.

205.4. The operating report must include, for the period covered by the report, a listing of emissions monitored under Conditions 2.3.e and 2.4.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.

205.5. **Transition from expired to renewed permit**. For the first period of this renewed operating permit, also provide the previous permit's operating report elements covering that partial period immediately preceding the effective date of this renewed permit.

[18 AAC 50.346(b)(6) & 50.326(j)(3)]
[40 C.F.R. 71.6(a)(3)(iii)(A)]

206. Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report according to Condition 202.

206.1. 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 11, 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.

206.2. **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.

206.3. In addition, submit a copy of the report directly to the Clean Air Act Compliance Manager, US EPA Region 10, ATTN: Air Toxics and Enforcement Section, Mail Stop: 20-C04, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101-3188.

[18 AAC 50.205, 50.345(a) & (j), & 50.326(j)]
[40 C.F.R. 71.6(c)(5)]

207. Emission Inventory Reporting. The Permittee shall submit to the Department reports of actual emissions for the previous calendar year, by emissions unit, of CO, NH_3, NO_x, PM_{10}, $PM_{2.5}$, SO_2, VOC and lead (Pb) and lead compounds, as follows:

207.1. **Every-year inventory.** Each year by April 30, if the stationary source's potential to emit for the previous calendar year equals or exceeds:

a. 250 TPY of NH_3, PM_{10}, $PM_{2.5}$ or VOC; or

b. 2,500 TPY of CO, NO_x, or SO_2.

207.2. **Triennial inventory.** Every third year by April 30, if the stationary source's potential to emit (except actual emissions for Pb) for the previous calendar year equals or exceeds:

a. For stationary sources located in Attainment and Unclassifiable Areas:

(i) 0.5 TPY of actual Pb, or

(ii) 1,000 TPY of CO; or

(iii) 100 TPY of SO_2, NH_3, PM_{10}, $PM_{2.5}$, NO_x or VOC.

b. For stationary sources located in Nonattainment Areas:

(i) 0.5 TPY of actual Pb, or

(ii) 1,000 TPY of CO or, when located in a CO nonattainment area, 100 TPY of CO; or

(iii) 100 TPY of SO_2, NH_3, PM_{10}, $PM_{2.5}$, NO_x, or VOC; or as specified in Conditions 207.2.b(iv) through 207.2.b(viii):

(iv) 70 TPY of SO_2, NH_3, $PM_{2.5}$, NO_x, or VOC in $PM_{2.5}$ serious nonattainment areas; or

(v) 70 TPY of PM_{10} in PM_{10} serious nonattainment areas; or

(vi) 50 TPY of NO_x or VOC in O_3 serious nonattainment areas; or

(vii) 25 TPY of NO_x or VOC in O_3 severe nonattainment areas; or

(viii) 10 TPY of NO_x or VOC in O_3 extreme nonattainment areas.

207.3. For reporting under Condition 207.2, the Permittee shall report the annual emissions and the required data elements under Condition 207.4 every third year for the previous calendar year as scheduled by the EPA.[89].

[89] The calendar years for which reports are required are based on the triennial reporting schedule in 40 C.F.R. 51.30(b)(1), which requires states to report emissions data to the EPA for inventory years 2011, 2014, 2017, 2020, and every 3rd year thereafter. Therefore, the Department requires Permittees to report emissions data for the same inventory years by April 30 of the following year (e.g., triennial emission inventory report for 2020 is due April 30, 2021, triennial emission inventory report for 2023 is due April 30, 2024, etc.).

207.4. For each emissions unit and the stationary source, include in the report the required data elements[90] contained within the form included in the Emission Inventory Instructions available at the Department's AOS system on the Point Source Emission Inventory webpage at http://dec.alaska.gov/Applications/Air/airtoolsweb/PointSourceEmissionInventory.

207.5. Submit the report in accordance with the submission instructions on the Department's Standard Permit Conditions webpage at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-xv-and-xvi-submission-instructions/.

[18 AAC 50.040(j)(4), 50.200, 50.326(j)(3), & 50.346(b)(8)]
[40 C.F.R. 51.15, 51.30(a)(1) & (b)(1), and Appendix A to 40 C.F.R. 51 Subpart A]

208. NSPS and NESHAP Reports. The Permittee shall comply with the following:

208.1. **Reports.** Except for previously submitted reports and federal reports and notices submitted through EPA's Central Data Exchange (CDX) and Compliance and Emissions Data Reporting Interface (CEDRI) online reporting system, attach to the operating report required by Condition 205 for the period covered by the report, a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10. For reports previously submitted to ADEC or submitted through CDX/CEDRI, state in the operating report the date and a brief description of each of the online reports submitted during the reporting period.

208.2. **Waivers.** Upon request by the Department, provide a written copy of any EPA granted alternative monitoring 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) & (f) and 40 C.F.R. 71.6(c)(6)]

[90] The required data elements to be reported to the EPA are outlined in 40 C.F.R. 51.15 and Tables 2a and 2b to Appendix A of 40 C.F.R. 51 Subpart A.

Section 10. Permit Changes and Renewal

209. Permit Applications and Submittals. The Permittee shall comply with the following requirements for submitting application information to the EPA:

209.1. 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;

209.2. The information shall be submitted to the Part 70 Operating Permit Program, US EPA Region 10, Air Permits and Toxics Branch, Mail Stop: 15-H13, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101-3188;

209.3. 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

209.4. The Permittee shall maintain records as necessary to demonstrate compliance with this condition.

[18 AAC 50.040(j)(7), 50.326(a) & (j)(3), and 50.346(b)(7)]
[40 C.F.R. 71.10(d)(1)]

210. Emissions Trading. No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(8)]

211. 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:

211.1. Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;

211.2. 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;

211.3. The change shall not qualify for the shield under 40 C.F.R. 71.6(f);

211.4. The Permittee shall keep a record describing changes made at the stationary 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)]

212. Operational Flexibility. The Permittee may make CAA Section 502(b)(10)[91] 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):

212.1. The Permittee shall provide EPA and the Department with a written notification no less than seven days in advance of the proposed change.

212.2. For each such change, the notification required by Condition 212.1 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.

212.3. The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 212.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(13)]

213. Permit Renewal. To renew this permit, the Permittee shall submit to the Department[92] an application under 18 AAC 50.326 no sooner than **March 2, 2026** and no later than **March 2, 2027.** The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary 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) & (j)(2)]
[40 C.F.R. 71.5(a)(1)(iii) & 71.7(b) & (c)(1)(ii)]

[91] As defined in 40 C.F.R. 71.2, CAA Section 502(b)(10) changes are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

[92] Submit permit applications to the Department's Anchorage office. The current address is: Air Permit Intake Clerk, ADEC, 555 Cordova Street, Anchorage, AK 99501.

Section 11. Compliance Requirements

General Compliance Requirements

214. Compliance with permit terms and conditions is considered to be compliance with those requirements that are

214.1. included and specifically identified in the permit; or

214.2. determined in writing in the permit to be inapplicable.

[18 AAC 50.326(j)(3) & 50.345(a) & (b)]

215. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 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

215.1. an enforcement action;

215.2. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

215.3. denial of an operating permit renewal application.

[18 AAC 50.040(j), 50.326(j) & 50.345(a) & (c)]

216. For applicable requirements with which the stationary source is in compliance, the Permittee shall continue to comply with such requirements.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(A)]

217. For applicable requirements that will become effective during the permit term, the Permittee shall meet such requirements on a timely basis.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(B)]

218. 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)]

219. 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

219.1. enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;

219.2. have access to and copy any records required by the permit;

219.3. inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

219.4. 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 12. 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.

220. Nothing in this permit shall alter or affect the following:

220.1. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; or

220.2. 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)]

221. Table G identifies the emissions 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
Stationary Source-Wide	18 AAC 50.055(d)(1)	Stationary source does not operate a fluid catalytic cracking unit.
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	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.
	60.105(a)(3) & (e)(3)(i)	Stationary source 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).
Stationary Source-Wide	Under 40 C.F.R. 60 Subpart Ja: 60.102a(b) – (e); 60.104a(a), (b), (d) – (g); 60.105a	Stationary source does not operate a fluid catalytic cracking unit or fluid coking unit.
	60.102a(g)(1)(i); 60.107a(a)(1)	Stationary source has elected to maintain compliance with the fuel gas H_2S standards of 60.102a(g)(1)(ii) and monitor H_2S within the fuel gas system per 40 C.F.R. 60.107a(a)(2) instead of directly monitoring SO_2 emissions.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
101	Under 40 C.F.R. 60 Subpart Ja: 60.102a(f); 60.103a(c)(3); 60.104a(h); 60.106a	The stationary source's Sulfur Recovery Plant is subject to NSPS J and has not undergone construction, modification, or reconstruction since May 14, 2007. The SRU was last modified before May 14, 2007.
58, 87, 88, and 89	Under 40 C.F.R. 60 Subpart K 60.112(a)(2)	Stationary source does not store petroleum liquid with a true vapor pressure greater than 570 mm Hg (11.1 psia) within these tanks and therefore is not required to install a vapor recovery system.
59, 60, and 107	Under 40 C.F.R. 60 Subpart Ka 60.112a(a)(1); 60.113a(a)(1)	Stationary source does not operate external floating roof tanks.
	60.112a(a)(3); 60.113a(a)(2)	Stationary source does not store petroleum liquid with a true vapor pressure greater than 570 mm Hg (11.1 psia) within these tanks and therefore is not required to install a vapor recovery system.
	60.112a(a)(4)	Stationary source does not utilize the alternative equivalent standards of NSPS Ka.
	60.114a	Stationary source does not use an alternative means of compliance for 40 C.F.R. 60 Subpart Ka.
120	Under 40 C.F.R. 60 Subpart Kb: 60.112b(a)(2); 60.113b(b); 60.115b(b)	Stationary source does not operate external floating roof tanks.
	60.112b(a)(3); 60.113b(c-d); 60.115b(c-d)	Stationary source does not store petroleum liquid with a true vapor pressure greater than 570 mm Hg (11.1 psia) within these tanks and therefore is not required to install a vapor recovery system.
	60.112b(a)(4)	Stationary source does not utilize the alternative equivalent standards of NSPS Kb.
	60.114b	Stationary source does not use an alternative means of compliance for 40 CFR 60 Subpart Kb.
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	40 C.F.R. 60 Subpart GGG/VV	All EUs that were previously subject to NSPS Subpart GGG/VV are now subject to NSPS Subpart GGGa/VVa.
Stationary Source-Wide	Under 40 C.F.R. 60 Subpart GGGa/VVa: 60.482-10a(b) & (c); 60.482-3a(j)	Stationary source does not operate the type of equipment covered by these requirements such as vapor recovery systems, condensers and absorbers, enclosed combustion devices, or an existing reciprocating compressor in a process unit.
121	Under 40 C.F.R. 60 Subpart JJJJ: 60.4231, 60.4232, 60.4238, 60.4239, 60.4240, 60.4241, 60.4242, 60.4247(b), and 60.4247(c)	Conditions apply only to manufacturers of spark ignition internal combustion engines. Stationary source is not a manufacturer of engines.
	60.4233(a)	Conditions only apply to stationary spark ignition internal combustion engines with a rated horsepower

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
		less than 25 manufactured on or after July 1, 2008 subject to this part. EU ID 121 does not meet these criteria.
	60.4233(b) and 60.4235	Conditions apply to stationary spark ignition internal combustion engines that combust gasoline. EU ID 121 does not combust gasoline.
	60.4233(c) - (e)	Conditions apply to stationary spark ignition internal combustion engines that combust LPG. Stationary source does not operate any stationary LPG-fired engines.
	60.4233(f), 60.4243(c), and 60.4243(i)	Conditions apply to modified or reconstructed stationary spark ignition internal combustion engines subject to this part. EU ID 121 is not a modified or reconstructed engine.
	60.4233(g)	Conditions apply to stationary wellhead gas internal combustion engines subject to this part. Stationary source does not operate any stationary wellhead gas internal combustion engines.
	60.4233(h)	Conditions apply to engines that are required to comply with the requirements of 40 C.F.R. 1048.101. EU 121 is not subject to this requirement.
	40 C.F.R. 60.4237(a); 40 C.F.R. 60.4245(b)	Conditions apply to emergency stationary spark ignition internal combustion engines rated greater than 500 horsepower built after July 1, 2010 that do not meet the standards applicable to non-emergency engines. EU 121 does not meet these criteria.
	60.4237(c)	Conditions apply to emergency stationary spark ignition internal combustion engines rated less than 130 horsepower built after July 1, 2008 that do not meet the standards applicable to non-emergency engines. EU ID 121 does not meet these criteria.
	60.4243(a)	Conditions apply to stationary spark ignition internal combustion engines manufactured after July 1, 2008 subject to emission standards in §60.4233(a) through (c). EU ID 121 does not meet these criteria.
	60.4243(f)	Conditions apply to stationary spark ignition internal combustion engines rated less than 500 horsepower that are subject to performance testing under this rule. EU 121 does not meet these criteria.
	60.4243(h)	Conditions apply to stationary spark ignition internal combustion engines rated less than 500 horsepower manufactured after July 1, 2007 and before July 1, 2007 that are subject to this part. EU ID 121 does not meet these criteria.
	60.4245(c)	Conditions apply to emergency stationary spark ignition internal combustion engines rated greater than 500 horsepower that are subject to this rule. EU ID 121 does not meet these criteria.
	60.4247(a)	Conditions apply to emergency stationary spark ignition internal combustion engines rated less than 130

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
		horsepower that are subject to this rule. EU ID 121 does not meet these criteria.
32A & 33A	Under 40 C.F.R. 60 Subpart KKKK: 60.4335	EU IDs 32A and 33A do not use water or steam injection to verify compliance with the emission limitations from Subpart KKKK.
	60.4345 60.4350 60.4355 60.4375(a) 60.4380 60.4405 60.4410	EU 32A and 33A do not utilize continuous monitoring systems to verify compliance with the NO_x emission limitations from Subpart KKKK.
	60.4360 60.4370 60.4375(a) 60.4385 60.4415	EU 32A and 33A only combust pipeline quality natural gas less than 20 grains sulfur per 100 SCF or fuel oil of less than 500 ppmw sulfur, meeting the requirements of 60.4365
	60.4390	EU 32A and 33A are not emergency combustion turbines or research and development turbines.
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	40 C.F.R. 61.355(a)(5) 40 C.F.R. 61.357(b)	The Total Annual Benzene Quantity (TAB) for the facility is greater than 1 Mg/yr.
Stationary Source-Wide	Under 40 C.F.R. 63 Subpart CC 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.
All tanks	Under 40 C.F.R. 63 Subpart G as referenced within Subpart CC: 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.
	63.119(d) 63.120(c)	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

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	63.123(e)	converted to IFR to comply with storage vessel provisions.
	63.119(e) – (g) 63.120(d) - (f) 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 Y as referenced within Subpart CC: 63.651	Stationary source does not have marine vessel loading operations at the Refinery. Marine vessel loading operations occur at Kenai Pipeline Facility and applicable requirements are included in the Kenai Pipeline Facility operating permit.
	Under 40 C.F.R. 63 Subpart WW as referenced within Subpart CC: 63.1063(a)(1)(ii) 63.1063(c)(2) 63.1063(d)(3)	Stationary source does not operate external floating roof tanks.
	63.1064	Stationary source does not use an alternative means of compliance for 40 C.F.R. 63 Subpart WW.
Stationary Source-Wide	Under 40 C.F.R. 63 Subpart UUU: 63.1564 63.1565	Stationary source does not operate a catalytic cracking unit.
Stationary Source-Wide	63.6600(b)	Requirements apply to 2 stage lean burn stationary combustion engines. Stationary source does not operate any engines meeting this definition.
	63.6601 63.6611 63.6625(d)	Requirements apply to new or reconstructed 4 stage lean burn (4SLB) stationary RICE between 250 and 500 horsepower. Stationary source does not operate any engines meeting this definition.
	63.6603(a-f) 63.6625(e)(3-10) 63.6630(e) 63.6640(c) 63.6645(i)	Conditions apply to reciprocating internal combustion engines at area sources. Kenai Refinery is a major source of HAPs.
	63.6625(a)	Conditions apply to CEMS installed in RICE. Stationary source does not utilize CEMS on any RICE.
	63.6625(c) 63.6655(c)	Conditions apply to RICE fired with landfill gas or digester gas. Stationary source does not operate any engines that combust landfill or digester gas.
	63.6625(e)(1)	Conditions apply to existing stationary RICE rated less than 100 Hp. Stationary source does not operate any existing stationary RICE rated less than 100 Hp.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	63.6625(g)	Conditions apply to existing non-emergency, non-black start compression ignition engine rated greater than 300 Hp that is not equipped with a closed crankcase ventilation system. Stationary source does not operate engines meeting these criteria.
	63.6655(c)	New or reconstructed stationary RICE which fires landfill gas or digester gas you must keep the records of daily fuel usage. Stationary source does not operate engines meeting these criteria.
Stationary source-wide	Under 40 C.F.R 63 Subpart GGGGG: 63.7885 – 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	Stationary source'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.

Section 13. Visible Emissions Forms

VISIBLE EMISSIONS 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" (a copy is available in https://www3.epa.gov/ttnemc01/methods/webinar8.pdf)

- 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 visible emissions observation is being made.
- Phone (Key Contact): number for appropriate contact.
- Stationary 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 clinometer.
- 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, note in the Comments column whether the Plume is "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 color of clouds and 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.
- Observer's Affiliation: observer's employer.
- Certifying Organization, Certified By, Date: name of "smoke school" certifying observer and date of most recent certification.

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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 Start / End	Direction From Observer Start / End	8					
Describe Emissions & Color Start	End	9					
Visible Water Vapor Present? If yes, determine approximate distance from the No / Yes	stack exit to where the plume was read	10					
Point in Plume at Which Opacity Was Determined		11					
Describe Plume Background Start / End	Background Color Start / End	12					
Sky Conditions: Start	End	13					
Wind Speed Start / End	Wind Direction From Start / End	14					
Ambient Temperature	Wet Bulb Temp / RH percent	15					
SOURCE LAYOUT SKETCH: 1 Stack or Point Being Read 2 Wind Direction From		16					
3 Observer Location 4 Sun Location 5 North Arrow 6 Other Stacks		17					
		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:	
Signature:	Observer's Signature / Date / 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 14. SO_2 Material Balance Calculation

If a fuel shipment contains more than 0.75 percent sulfur by weight, calculate the three-hour exhaust concentration of SO_2 using the following equations:

A. = 31,200 x [**wt%S_{fuel}**] = 31,200 x _____ = _____

B. = 0.148 x [**wt%S_{fuel}**] = 0.148 x _____ = _____

C. = 0.396 x [**wt%C_{fuel}**] = 0.396 x _____ = _____

D. = 0.933 x [**wt%H_{fuel}**] = 0.933 x _____ = _____

E. = B + C + D = _____ + _____ + _____ = _____

F. = 20.9 – [**vol%$_{dry}O_{2,\ exhaust}$**] = 20.9 – _____ = _____

G. = [**vol%$_{dry}O_{2,\ exhaust}$**] ÷ F = _____ ÷ _____ = _____

H. = 1 + G = 1 + _____ = _____

I. = E x H = _____ x _____ = _____

SO_2 concentration = A ÷ I = _____ ÷ _____ = _____ ppm

The **wt%S_{fuel}, wt%C_{fuel},** and **wt%H_{fuel}** are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent of sulfur (wt%S_{fuel}) is obtained pursuant to Condition 12. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (**vol%$_{dry}O_{2,\ exhaust}$**) is obtained from oxygen meters, manufacturer's data, or from the most recent analysis under 40 C.F.R. 60, Appendix A-2, Method 3, adopted by reference in 18 AAC 50.040(a), at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if **wt%S_{fuel}** = 1.0%, then enter 1.0 into the equations not 0.01 and if **vol%$_{dry}O_{2,\ exhaust}$** = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.346(c)]

Section 15. Notification Form[93]

Kenai Refinery **AQ0035TVP03**

Stationary Source Name **Air Quality Permit Number.**

Tesoro Alaska Company, LLC

Company Name

When did you discover the Excess Emissions/Permit Deviation?

Date: ____/____/____ Time: ____:____

When did the event/deviation occur?

Begin: Date: ____/____/____ Time: ____:____ (please use 24-hr clock)

End: Date: ____/____/____ Time: ____:____ (please 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

Note: All "excess emissions" are also "permit deviations." However, use only Section 1 for events that involve excess emissions.

☐ Deviation from Permit Conditions – Complete Section 2 and Certify

Note: Use only Section 2 for permit deviations that do not involve excess emissions.

☐ Deviation from COBC[94], CO[95], or Settlement Agreement – Complete Section 2 and Certify

[93] Revised as of July 22, 2020.

[94] Compliance Order By Consent

[95] Compliance Order

Section 1. Excess Emissions

(a) **Was the exceedance** ☐Intermittent or ☐Continuous

(b) **Cause of Event** (Check one that applies. Complete a separate form for each event, as applicable.):

☐Start Up/Shut Down ☐Natural Cause (weather/earthquake/flood)

☐Control Equipment Failure ☐Scheduled Maintenance/Equipment Adjustments

☐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. Attach supporting information if necessary.

(d) **Emissions Units (EU) Involved:**

Identify the emissions units 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

(e) **Type of Incident:** (Please check all that apply and provide the value requested, if any):

- ☐ Opacity _____%
- ☐ Control Equipment Down
- ☐ Emission Limit Exceeded
- ☐ Flaring
- ☐ Other**:** _____
- ☐ Venting _____(gas/scf)
- ☐ Fugitive Emissions
- ☐ Marine Vessel Opacity

(f) **Corrective Actions:**

Describe actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence. Attach supporting information if necessary.

(g) **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 (<u>go to end of form</u>)

Section 2. Permit Deviations

(a) **Permit Deviation Type:** (Check all boxes that apply per event. Complete a separate form for each event, as applicable.)

- ☐ Emissions Unit-Specific Requirements
- ☐ Stationary Source-Wide Specific Requirements
- ☐ Monitoring/Recordkeeping/Reporting Requirements
- ☐ General Source Test Requirements
- ☐ Compliance Certification Requirements
- ☐ Standard/Generally Applicable Requirements
- ☐ Insignificant Emissions Unit Requirements
- ☐ Other: _____

(b) **Emissions Units (EU) Involved:**

Identify the emissions units involved in the event, using the same identification number and name as in the permit. List the corresponding permit condition and the deviation.

EU ID	EU Name	Permit Condition /Potential Deviation

(c) **Description of Potential Deviation:**

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation. Attach supporting information if necessary.

(d) **Corrective Actions:**

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence. Attach supporting information if necessary.

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). Read and sign the certification in the bottom of the form above. (See Condition 201.)*

Submit this report in accordance with the submission instructions on the Department's Standard Permit Conditions web page at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-iii-and-iv-submission-instructions/.

If submitted online, report must be submitted by an authorized E-signer for the stationary source (according to Condition 201).

[18 AAC 50.346(b)(3)]