DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY OPERATING PERMIT

Permit No. AQ0071TVP03

Date: Public Comment - April 9, 2016
Expiration Date: Five Years

The Alaska Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an Operating Permit to the Permittee, **Flint Hills Resources Alaska, LLC**, for the operation of the **North Pole Refinery**.

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.

Citations listed herein are contained within 18 AAC 50 dated March 2, 2016 Register 217. 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. AQ0071TVP02 expires.

This Operating Permit becomes effective <insert date – 30 days after issue date>.

John F. Kuterbach, Manager
Air Permits Program

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List of Abbreviations Used in this Permit

AAC .....Alaska Administrative Code
AS .....Alaska Statutes
ASTM .....American Society for Testing and Materials
bbl .....barrel
bhp.....Boiler Horsepower
CAM. .....Compliance Assurance Monitoring
C.F.R. .....Code of Federal Regulations
CEMS.....Continuous Emissions Monitoring System
CGA. .....cylinder gas audit
cm.....centimeter
CMS. .....Continuous Monitoring System
CO. .....Carbon Monoxide
COMS. .....Continuous Opacity Monitoring System
Department.....Alaska Department of Environmental Conservation
dscm .....dry standard cubic meter
dscf.....Dry standard cubic foot
EFR .....external floating roof
EPA.....US Environmental Protection Agency
EU .....emissions unit
FR.....floating roof
gr./dscf .....grain per dry standard cubic foot (1 pound = 7,000 grains)
gph.....gallons per hour
H_2S .....hydrogen sulfide
HAGO .....heavy atmospheric gas oil
HAPs .....Hazardous Air Pollutants [*HAPs* as defined in AS 46.14.990(14)]
HC .....hydrocarbon
HHV.....higher heating value
hp.....horsepower
hr .....hour
IFR .....internal floating roof
ID .....Emissions Unit Identification Number
in .....inch
kPa.....kiloPascals
LAGO .....light atmospheric gas oil
lb .....pounds
LSR .....light straight-run
MACT.....Maximum Achievable Control Technology as defined in 40 C.F.R. 63
m .....meter
mg .....milligram
Mg.....Megagram
MJ .....megajoule
Mlbs .....thousand pounds
mm .....millimeter
MMBtu .....million British thermal units
NAICS.....North American Industry Classification System
NESHAPs .....Federal National Emission Standards for Hazardous Air Pollutants [*NESHAPs* as contained in 40 C.F.R. 61 and 63]
NSPS.....Federal New Source Performance Standards (in 40 C.F.R. 60)
O_2 .....Oxygen
Pa.....Pascals
Ppb .....Parts per billion
ppm, ppmw .....parts per million by weight

ppmv, ppmvd .....Parts per million by volume on a dry basis
PS .....Performance Specification
PSD .....Prevention of Significant Deterioration
psia .....pounds per square inch (absolute)
^{o}R.....Temperature in degrees Rankine
RAA .....relative accuracy analysis
RATA.....relative accuracy test audit
RICE .....reciprocating internal combustion engines
RM .....Reference Method
Scm .....standard cubic meter
SIC .....Standard Industrial Classification
SO_2 .....Sulfur Dioxide
TPY .....Tons per year
VOC .....volatile organic compound [*VOC* as defined in 40 C.F.R. 51.100(s)]
VOL .....volatile organic liquid [*VOL* as defined in 40 C.F.R. 60.111b, Subpart Kb]
VRU .....Vapor Recovery Unit
wt% .....weight percent

Section 1. Stationary Source Information

Identification

Permittee:		**Flint Hills Resources Alaska, LLC**
Stationary Source Name:		**North Pole Refinery**
Location:		64˚ 44′ 14″ North; -147˚ 20′ 49″ West
Physical Address:		1100 H and H Lane North Pole, Alaska 99705
Owner:		**Flint Hills Resources Alaska, LLC**
Operator:		Flint Hills Resources Alaska, LLC
Permittee's Responsible Official:		Randy Rowe, FHR Operations Manager-Alaska (907) 488-0043
Designated Agent:		CT Corporation System 801 West 10th Street, Suite 300 Juneau, Alaska 99801 (907) 586-3340
Stationary Source and Building Contact:		Serena Lewellyn, Environmental Engineer (907) 490-6217 Tom Green- Environmental Engineer (907) 490-6265
Fee Contact:		Serena Lewellyn-Environmental Engineer (907) 490-6217
Permit Contact:		Tom Green- Environmental Engineer (907) 490-6265
Process Description:	SIC Code	5171 - Bulk Gasoline Terminal; 2911 - Petroleum Refining
	NAICS Code	424710 - Petroleum Bulk Stations and Terminals; 324110 - Petroleum Refinieries

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

Section 2. Emissions Unit (EU) Inventory and Description

EUs listed in Table A through Table H have specific monitoring, recordkeeping, or reporting conditions in this permit. EU descriptions and ratings are given for identification purposes only.

Table A. Heater and Boiler EUs

EU ID Group	EU Name	EU Description	Rating/Size	Fuel	Installation or Construction Date
1	H-241	Unit #1 Crude Heater	120 MMBtu/hr	Dual fired: LSR and fuel gas	1998
	H-1001	Unit #1 Auxiliary Crude Heater	62.5 MMBtu/hr		1995
2	B-401	Steam Generator	25 MMBtu/hr	LSR	1998
	B-402	Steam Generator	25 MMBtu/hr		1998
3	H-5005	Glycol Heater in Unit #1	14.5 MMBtu/hr	LSR	1998
	H-5006	Glycol Heater in Unit #1	14.5 MMBtu/hr		1998
	H-5010	Glycol Heater in Unit #3	10 MMBtu/hr		1998
4	H-2001	Unit #2 Crude Heater	325.6 MMBtu/hr	Dual fired: LSR (includes vaporized LSR) and fuel gas (includes waste gas)	1985
	H-3700	Asphalt Unit Heater	25 MMBtu/hr		1984
5	H-8001	Unit #3 Crude Heater	245 MMBtu/hr	Dual fired: LSR (includes vaporized LSR) and Fuel gas	1998
6	H-8002	Unit #3 LSR Vaporizer Heater	5 MMBtu/hr	LSR	1998
7	H-5001	Asphalt Storage Tank Heater	2.5 MMBtu/hr	Diesel	1984
	H-5002	Asphalt Storage Tank Heater	2.5 MMBtu/hr	Diesel	1984
	H-5003	Asphalt Storage Tank Heater	2.5 MMBtu/hr	Diesel	1984
8	Flare #1	Flare (w/ pilot running on propane)	947 Mlbs/hr	Process gas	1985

Table Notes:
MMBtu/hr, million British thermal units-per-hour; LSR, light straight-run; and Mlbs/hr, thousand pounds-per-hour.
Unit #2 Crude Heater, EU Group 4, was modified in 1997; see the Statement of Basis for additional detail.

Table B. Waste Gas EUs

EU ID	EU Name	EU Description	Rating/Size	Fuel
9	Waste Gas	Extraction Unit and Vacuum Tower Waste Gas	N/A	2005

Table Notes:
EU ID 9 was originally added to EU inventory on September 29, 2005 as ID number 4a, per the FHR Administrative Permit Amendment Application dated September 29, 2005.

Table C. Vapor Recovery System EUs

EU ID	EU Name	EU Description	Rating/Size	Fuel
10	VRU #1	Loading Vapor Recovery Unit	4,500 bbl/day gasoline	1991
11	VRU #2	Loading Vapor Recovery Unit	36,000 bbl/day gasoline	1997

Table Notes:
VRU, vapor recovery unit; and bbl, barrel.

Table D. Storage Tank EUs

EU ID Group	Tank No.	Roof Type	Volume		Normal Liquid Stored	Installation or Construction Date
			Bbl	Gallons		
12	820	FR	10,089	423,738	Asphalt	June 1984
	821	FR	10,089	423,738	Asphalt	June 1984
	822	FR	19,187	805,854	Asphalt, LAGO	April 1987
	823	FR	19,160	804,720	Asphalt	May 1986
13	101	EFR	55,095	2,213,990	Crude Oil	June 1976
	112	EFR	22,672	1,162,224	Return Oil	June 1976
	501	IFR	9,135	383,670	Gasoline	June 1976
	502	IFR	9,135	383,670	Gasoline	June 1976
14	510	IFR	9,148	384,216	Diesel	April 1981
	511	IFR	9,148	384,216	Diesel	April 1981
	513	IFR	9,142	383,964	Gasoline, Heating Oil #2	April 1983
	514	IFR	9,142	383,964	Heating Oil #2	April 1983
	515	IFR	18,033	757,386	Gasoline	May 1983
	616	IFR	9,102	382,284	Gasoline	June 1984
	617	IFR	9,102	382,284	Gasoline	June 1984
	618	IFR	9,102	382,284	Gasoline	June 1984
	619	IFR	9,102	382,284	Gasoline	June 1984
15	302	IFR	56,453	2,371,026	Kerosene, Jet Fuel	1987
	303	IFR	56,631	2,378,502	Kerosene, Jet Fuel	May 1986
16	193	IFR	3,000	126,000	Gasoline, VRU Sponge Oil	May 1985
	304	IFR	49,516	2,079,672	Kerosene, Jet Fuel	May 1997
	403	IFR	19,115	802,830	Naphtha	May 1987
	404	IFR	19,126	803,292	Naphtha	May 1987
17	5110	EFR	91,750	3,853,500	Crude Oil	1998
	5103	EFR	91,750	3,853,500	Kerosene	1998
	5114	EFR	11,000	462,000	Return Oil	2008

Table Notes:
FR, floating roof, IFR, internal floating roof; EFR, external floating roof; and LAGO, light atmospheric gas oil.

The liquids stored may be different than the 'normal liquid stored' as listed due to operational needs.

Table E. Fugitive VOC EUs

EU ID Group	EU Name	EU Description	Rating/Size	Installation or Construction Date
18		Pumps in light liquid service		Affected facilities after January 4, 1983 and on or before November 7, 2006
19		Compressors		
20		Pumps and valves in heavy liquid service, Pressure relief devices in light liquid or heavy liquid service, Flanges and other connectors		
21		Valves in gas/vapor or light liquid service		
22		Open ended valves or lines		
23		Pressure relief devices in gas/vapor service		
24		Sampling connection systems, except in situ sampling systems, and sampling systems without purges		

Table Notes:
Individual components may be routinely added or replaced at existing petroleum refinery equipment leak affected facilities without necessarily triggering additional NSPS applicability.

Table F. Wastewater EUs

EU ID Group	EU Name	EU Description	Rating/Size	Installation or Construction Date
25		All refinery waste streams, and facilities regulated under 40 CFR 61 Subpart FF		All
26		Oil-Water Separator 192, Crude Unit 3 drains and sumps, Tank 907		July 1989
27	195	Oil-Water Separator/Surge Control Vessel	1,000 bbl	2003
	196	Oil-Water Separator/Surge Control Vessel	1,000 bbl	2003

Table G. Other EUs

EU ID Group	Tank No.	Roof Type	Volume		Normal Liquid Stored	Installation or Construction Date
			Bbl	Gallons		
28	190	FR	360	15,120	Additives	June 1976
	191	FR	686	28,812	Empty	1983
	401	FR	19,100	802,200	Diesel	June 1976
	402	FR	19,097	802,074	Diesel	June 1976
	525	FR	203	8,526	Additives	2005
	901	FR	23,822	1,000,524	HAGO	June 1976
	5576	FR	238	9,996	Chemical (VOC)	1985

EU ID Group	Tank No.	Roof Type	Volume		Normal Liquid Stored	Installation or Construction Date
			Bbl	Gallons		
	5577	FR	238	9,996	Chemical (VOC)	1985
	5758	FR	238	9,996	Chemical (VOC)	1985
	70-73	FR	≈190	7,980	JP-4	≈1983
	Vehicle Refueling Tank 1	FR	119	5,000	Diesel	≈1985
	Vehicle Refueling Tank 2	FR	119	5,000	Gasoline	≈1985

Table Notes:
HAGO, heavy atmospheric gas oil; and VOC, volatile organic compounds.
The vehicle refueling tanks are owned and maintained by a third party.
Some of these EU ID groups are listed only in the section detailing the permit as shield from inapplicable requirements.

Table H. Reciprocating Internal Combustion Engine EUs

EU ID Group	EU Name	EU Description	Rating/Size	Installation or Construction Date
29	Fire Pump	Emergency Fire Pump	482 hp	1997

Table Notes:
hp, horsepower.

[18 AAC 50.326(a)]
[40 C.F.R. 51.166(b) & 40 C.F.R. 71.5(c)(3)]

Section 3. Alternative Operating Scenarios

1. Operating Scenarios. The stationary source is considered an oil refinery[1] when operating any EUs in Groups 1, 2, or 4 through 7 listed in Table A,[2] and a bulk petroleum terminal at all other times. Conditions 1 through 61, and 95 through 137 apply under all operating scenarios for the EUs referenced in this condition.

2. Bulk Petroleum Terminal Operations. The Permittee shall comply with Condition 1 at all times while operating the stationary source as a bulk petroleum terminal and notify the Department, in accordance with Condition 1, prior to transitioning from oil refinery operations to bulk petroleum terminal operations.

3. Oil Refinery Operations. The Permittee shall comply with Conditions 1 through 94 at all times while operating the stationary source as an oil refinery and notify the Department, in accordance with Condition 1, prior to transitioning from bulk petroleum terminal operations to oil refinery operations.

[1] In comport with the definition of a refinery under 40 CFR 61 Subpart FF, or 40 CFR 60 Subparts J, UU, GGG/GGGa/VV/VVVa, and QQQ.
[2] I.e., refining crude oil.

Section 4. State Requirements

Visible Emissions Standards

4. Industrial Process and Fuel-Burning Equipment Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU Groups 1 through 8 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), 18 AAC 50.055(a)(1), & 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

4.1 For EU Groups 1, 2, 3, 4, 6 and 7, monitor, record, and report in accordance with Conditions 5 through 7.

4.2 For EU Group 5, burn only fuel gas.[3] Monitoring of EU Group 5 shall consist of a certification in each operating report, required under Condition 122, that this EU Group fired only fuel gas. Report under Condition 121 if any fuel is burned other than fuel gas.

4.3 For EU Group 8, monitor, record, and report in accordance with Condition 8.

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

Visible Emissions Monitoring, Recordkeeping and Reporting

Liquid Fuel-fired Sources (EU Groups 1 through 4, 6, and 7)

5. Visible Emissions Monitoring. The Permittee shall observe the exhaust of EU Groups 1, 2, 3, 4, 6, and 7 for visible emissions using the Method 9 Plan under Condition 5.1. The Permittee may, for each unit, elect to continue the visible emissions monitoring schedule in effect from the previous permit at the time a renewed permit is issued, if applicable.

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

5.1 **Method 9 Plan.** For all 18-minute observations in this plan, observe the exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9[4], for 18 consecutive minutes to obtain 72 consecutive 15-second interval opacity observations.

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

b. Semi-annual Method 9 Observations. After observing emissions for three consecutive operating months under condition 5.1a, unless a six-minute average is greater than 15-percent opacity and one or more observations are greater than 20-percent, perform 18-minute observations at least semi-annually. Semi-annual observations must be taken between four and seven months after the previous set of observations.

[3] The meaning of "fuel gas" in this condition is expanded to include vaporized LSR.
[4] Adopted by reference in 18 AAC 50.040(a).

c. Annual Method 9 Observations. After at least two semi-annual 18-minute observations, unless a six-minute average is greater than 15-percent opacity and one or more individual observations are greater than 20-percent opacity, perform 18-minute observations at least annually. Annual observations must be taken between 10 and 13 months after the previous observations.

d. Increased Method 9 Frequency. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15-percent, and one or more observations are greater than 20-percent, then increase or maintain the 18-minute observation frequency for that EU to at least monthly intervals, until the criteria in Condition 5.1b for semi-annual monitoring are met.

6. Visible Emissions Recordkeeping. When required by any of Conditions 4.1 through 4.3, or in the event of a replacement of any of EU Groups 1, 2, 3, 4, 6 and 7 during the permit terms, the Permittee shall keep records as follows:

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

6.1 When using the Method 9 Plan of Condition 5.1, the observer shall

a. record on the Visible Emissions Field Data Sheet in Section 12

(i) the name of the stationary source, EU and location, EU type, observer's name and affiliation, operating rate (load or fuel consumption rate), and the date;

(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 mode (load or fuel consumption rate) 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, 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. determine the rolling six-minute average opacities by dividing the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, the observer shall calculate the average by summing the opacity of the 24 observations, dividing this sum by 24, and recording it as the average opacity on the sheet.

7. Visible Emissions Reporting. When required by any of Conditions 4.1 through 4.3, or in the event of a replacement of any of EU Groups 1, 2, 3, 4, 6 and 7 during the permit terms, the Permittee shall report visible emissions as follows:

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

7.1 Include in each operating report under Condition 122, for the period covered by the report:

a. for each EU under the Method 9 Plan,

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

(ii) a summary to include the

(A) number of days observations were made;

(B) highest six-minute average observed; and

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

b. a summary of any monitoring or recordkeeping required under Conditions 5 and 6 that was not performed;

7.2 Report under Condition 121

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

b. if any monitoring under condition 5 was not performed when required, report within three days of the date the monitoring was required.

8. Visible Emissions Monitoring, Recordkeeping, and Reporting. For EU Group 8, the Permittee shall observe one daylight flare event[5] within 12 months of the preceding flare event observation. If no event exceeds one hour within that 12-month period, then the Permittee shall observe the next daylight flare event.

8.1 Monitor flare events using Method-9.

8.2 Record the following information for observed events:

a. the flare(s) EU ID number;

b. results of the Method-9 observations;

c. reason(s) for flaring;

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

e. volume of gas flared.

[5] For the purposes of this permit, a "flare event" is flaring of gas 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.

8.3 Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available. If monitoring of a flare event is postponed for any of the reasons described in this condition, the Permittee shall include in the next operating report required by Condition 122, an explanation of the reason that the event was not monitored. If no events meeting this definition occur during a reporting period then no monitoring is required.

8.4 Attach copies of the records required by Condition 8.2 with the stationary source operating report required by Condition 122 for the period covered by that report.

8.5 Report under Condition 121 whenever the opacity standard in Condition 4 is exceeded.

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

Particulate Matter Emissions Standards

9. Industrial Process and Fuel-Burning Equipment Particulate Matter. The Permittee shall not cause or allow particulate matter emitted from EU Groups 1 through 8 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), 18 AAC 50.326(j), & 18 AAC 50.055(b)(1)]
[40 C.F.R. 71.6(a)(1)]

9.1 For EU Groups 1, 2, 3, 4, 6 and 7, monitor, record and report in accordance with Conditions 10 through 12.

9.2 The Permittee shall ensure that EU ID 5 and the flare in Group 8 only burn fuel gas. Monitoring for this EU shall consist of a certification in each operating report under Condition 122 that EU ID 5 and the flare in Group 8 only burned fuel gas. Report under Condition 121 if any fuel is burned other than fuel gas.

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

PM Monitoring, Recordkeeping and Reporting

For Liquid-Fired (includes dual fired) Boilers and Heaters

10. Particulate Matter Monitoring. The Permittee shall conduct source tests on EU Groups 1, 2, 3, 4, 6 and 7 to determine the concentration of PM in the exhaust as follows:

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

10.1 Except as required under Condition 10.3, conduct a PM source test according to the requirements set out in Section 7 no later than 90 calendar days after any time corrective maintenance fails to eliminate visible emissions greater than the 20-percent opacity threshold for two or more 18-minute observations in a consecutive six-month period.

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

10.3 The PM source test requirement in Condition 10 is waived for an EU if:

a. a PM source test during the most recent semiannual reporting period on that unit shows compliance with the PM standard since permit issuance, or

b. if a follow-up visible emission observation conducted using Method-9 during the 90 days shows that the excess visible emissions described in Condition 5.1d no longer occur.

11. Particulate Matter Recordkeeping. The Permittee shall keep records of the results of any PM testing and visible emissions observations conducted under Condition 10.

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

12. Particulate Matter Reporting. The Permittee shall report as follows:

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

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

12.1 In each operating report required by Condition 122, include for that period covered by the report

a. the dates, EU ID(s), and results when an 18-minute opacity observation was greater than the applicable threshold criterion in Condition 5.1d.

b. a summary of the results of any PM testing and visible emissions observations conducted under Condition 10.

12.2 Report as excess emissions, in accordance with Condition 121, any time the results of a source test for PM exceeds the PM emission limit stated in Condition 9.

Sulfur Compound Emission Standards Requirements

13. Sulfur Compound Emissions. The Permittee shall comply with applicable sulfur compound emission standards.

[18 AAC 50.040(j), 18 AAC 50.326(j), 18 AAC 50.055(c), & 18 AAC 50.055(d)(3)]
[40 C.F.R. 71.6(a)(1)]

13.1 When operating as an oil refinery as defined in Condition 1, the Permittee shall not[6] cause or allow sulfur compound emissions, expressed as sulfur dioxide (SO_2) and averaged over three hours, from EU Groups 1 through 8 to exceed:

a. for equipment burning only fuel gas, the concentration of uncontrolled emissions that would result from burning fuel gas containing 230 milligrams hydrogen sulfide (H_2S) per dry standard cubic meter (dscm);

b. for fuel burning equipment that does not burn fuel gas, 500 parts-per-million (ppm); or

[6] In accordance with 18 AAC 50.055(d)(3)

c. for fuel burning equipment that burns a combination of fuel gas and other fuels, a concentration based on the allowable emissions calculated in Conditions 13.1a and 13.1b prorated by the proportion of fuel gas and other fuels to the total fuel burned in the equipment.

[18 AAC 50.055(d)(3)]

13.2 When operating as a bulk petroleum terminal as defined in Condition 1, the Permittee shall not[7] cause or allow sulfur compound emissions, expressed as SO_2 and averaged over three hours, from EU Groups 1 through 8 to exceed 500 ppm averaged over a period of three hours.

[18 AAC 50.055(c)]

13.3 For EU Groups 1, 4, 5, and 6, do not cause or allow sulfur compounds emissions to exceed a SO_2 concentration of 20 parts-per-million by volume on a dry basis (ppmv), corrected to zero percent excess air and averaged over three consecutive hours, as demonstrated by the continuous emissions monitoring system (CEMS) installed to monitor SO_2 emissions.

[40 C.F.R. 60.105(a)(3)]

14. Monitoring, Recordkeeping, and Reporting Requirements for EU Groups 1 through 8. To demonstrate compliance with Conditions 13.1 through 13.3 the Permittee shall monitor in accordance with Conditions 14.1 through 1.1:

14.1 For EU Groups 1, 4, 5 and 6

a. record the sulfur oxide and either the oxygen or carbon dioxide in the stack in accordance with the requirements in 40 C.F.R. 60.13(h) using SO_2 CEMS, while each corresponding emission unit under each group is in operation;

(i) record the sulfur oxide concentration in the stack in units of ppmv;

(ii) record the oxygen or carbon dioxide in the stack in units of percent; and

b. measure the fuel use and determine the higher heating value (HHV) of the fuel to calculate the energy consumption in btu/hr. Use the product of the result from Equation 19-1 in 40 C.F.R. 60 Appendix A, Method 19 and the energy consumption in btu/hr to obtain lbs of SO_2 per-hour.

14.2 The CEMS for EU Group 8 shall record the H_2S concentration in accordance with the requirements in 40 C.F.R. 60.13(h). Generate rolling three-hour averages from the CEMS record.

14.3 For EU Groups 1, 4, 5, 6, and 8, conduct an evaluation of the acceptability of the CEMS within 180 days of installation in accordance with 40 C.F.R. 60, Appendix B, and conduct quality assurance procedures on the CEMS in accordance with Condition 62.1 and

a. report under Condition 122

[7] In accordance with 18 AAC 50.055(c)

(i) the monitoring results from Condition 14.3 corresponding to the period covered by the report; and

(ii) a copy of the semi-annual CEMS report required by 40 C.F.R. 60.7.

b. Report under Condition 121 periods of excess emissions, which are defined as follows:

(i) For EU Group 8, all rolling 3-hr periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system under 40 C.F.R. 60.105(a)(4) exceeds 230 mg/dscm (162 ppmv); and

(ii) For EU Groups 1, 4, 5 and 6, all rolling 3-hr periods during which the average concentration of SO_2 measured by the SO_2 continuous monitoring system under 40 C.F.R. 60.105(a)(3) exceeds 20 ppmv (zero percent excess air).

14.4 For EU Group 7, burn only fuel with sulfur content less than 0.5 percent by weight (wt%) and

a. to demonstrate compliance with Condition 14.4, analyze each batch of fuel burned following an appropriate method listed in 18 AAC 50.035, or another method approved in writing by the Department, to determine its sulfur content; and

b. report as follows:

(i) If the sulfur content analyzed under Condition 14.4a exceeds 0.5 percent by weight, the Permittee shall report under Condition 121.

(ii) The Permittee shall include in the report required by Condition 122, copies of lab analyses required in Condition14.4a.

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

15. Emission Limits established in Construction Permit No. 9831-AC005. Do not cause or allow SO_2 emissions from

15.1 any of the fuel burning equipment in EU Groups 1, 4, 5, 6, and 9 to equal or exceed 250 ppm SO_2 averaged over three consecutive hours or 150 ppm averaged over three consecutive months;

15.2 EU Groups 1, 4, 5, 6, and 9 to exceed 144 tons of SO_2 on a twelve-month rolling average;

15.3 SO_2 emissions from EU Group 2 to exceed 106.4 tons of SO_2 on a twelve-month rolling average;

15.4 SO_2 emissions from EU Group 3 to exceed 40.4 tons of SO_2 on a twelve-month rolling average; and

15.5 SO_2 emissions from EU Group 7 to exceed 15.9 tons of SO_2 on a twelve-month rolling average.

[Air Quality Control Construction Permit No. 9831-AC005]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

15.6 Calculate and record the monthly total and 12-month rolling total SO_2 emissions, in tons, for each month and each 12-month rolling period as follows:

a. For EU Groups 1, 4, 5, 6, and 9

(i) calculate SO_2 emissions in tons of SO_2/day by averaging the calculated hourly emissions derived in Condition 14.1 multiplied by the hours of operation of the corresponding EU during each day;

(ii) calculate the monthly SO_2 emissions, in tons of SO_2/month by adding the average daily tons of SO_2/day;

(iii) calculate a 12-month rolling summation of tons of SO_2 for the year; and

(iv) record all variables necessary for calculating total SO_2 emissions.

b. For EU Groups 2, 3 and 7

(i) calculate the daily SO_2 emissions for EU in each group, in tons of SO_2/day, by multiplying the average sulfur content of the fuel type burned times the amount of fuel used in each EU Group. Calculate the monthly SO_2 emissions, in tons of SO_2/month, by adding the average daily tons of SO_2/day;

(ii) calculate a 12-month rolling summation of tons of SO_2 for the year; and

(iii) record all variables necessary for calculating total SO_2 emissions.

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

15.7 Report as follows:

a. include with the facility operating report required by Condition 122 a list of the monthly total and 12-month rolling total SO_2 emissions, in tons/month and tons/12-months, from EU Groups 1 through 7, and 9.

b. Report any deviations from Condition 15 under Conditions 121 and 122.

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

NOx Owner Requested Limits[8] to Avoid PSD Major Modification

16. For EU Groups 1, 3, 5, and 6 listed in Table A, the Permittee shall not cause or allow oxides of nitrogen (NOx) emission rates, annual fuel consumption or heat input, or annual emissions of NO_X to exceed the limits shown in Table 1.

[Air Quality Control Construction Permit No. 9831-AC005]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]
[40 C.F.R. 71.6(a)]

Table 1. NOx emission rates, fuel consumption or heat input, and annual emission limits

EU Groups	Source Number	NOx Emission Rate (lb/MMBtu) Not-to-Exceed	Annual Fuel Consumption (bbl/yr) or Heat Input(MMBtu/yr) Not-to-Exceed	NOx Emissions*
1	H-241	0.17	No limit	93.2 tons (combined)
	H-1001	0.15		
3	H-5005	0.17	27,710 bbl/yr* of #2 fuel oil, or Btu equivalent (164,100 MMBtu/yr*) of another fuel, or a proportional combination (combined)	14.1 tons
	H-5006	0.17		
	H-5010	0.17		
5, 6	H-8001	0.04	No limit	38.7 tons (combined)
	H-8002	0.17	No limit	

Table Notes:
(*) 12-month rolling limit

16.1 Monitor and record the 12-month rolling emission limits and fuel consumption/heat input limits listed in Table 1 in accordance with Conditions 16.2 and 16.3.

16.2 For each EU in Groups 1, 3, 5, and 6, calculate the NO_X emissions in tons-per-each 12-month rolling period as follows:

a. Analyze each fuel used in any of the EUs listed in Table 1 and record the HHV. Record the HHV for No. 2 diesel fuel in MMBtu/bbl, and all other fuels in MMBtu/lb.

b. Monitor and record the quantity of each fuel used in each EU Group listed in Table 1. Record the quantity of No. 2 diesel fuel in bbl, and all other fuels in lbs.

[8] Construction Permit No. 9831 AC005 contains owner requested limits on the emissions of oxides of nitrogen. These limits have been incorporated into this Operating Permit as indicated in the Statement of Basis.

c. Calculate and record the 12-month rolling total NOx emissions as follows:

(i) determine the total MMBtu/month by multiplying the HHV by the quantity of each fuel used;

(ii) determine the monthly NOx emissions using Equation 1; and

Equation 1 $$NOx = \frac{EF \times HI}{2000}$$

Where:

NO_X = NOx emissions, in tons;
EF = the emission rate, in lb NOx/MMBtu. Until the source test required by Condition 16.3 has been conducted, use the emission rate calculated from the most recent previous source test (provided that the source test results were approved by the Department); after the source test, use the emission rate of the source test); and
HI = the total heat input for the EU Group for the month, in MMBtu.

(iii) Add the emissions for the month to the previous 11 months, to obtain 12 month rolling total NOx emissions.

d. Calculate and record the 12-month rolling total fuel consumption or heat input, based on the HHV, for each source in EU Group 3 as follows:

(i) If only No. 2 fuel oil was burned in the EUs in Group 3, add the quantity, in bbl, to the quantity for the previous 11 months to obtain the 12-month rolling total fuel consumption; otherwise

(ii) multiply the HHV of each fuel, in MMBtu, by the quantity of each fuel, and add the total MMBtu to the previous 11 months to obtain the 12-month rolling total heat input.

16.3 Conduct NO_X and diluent emission source tests using EPA Method 7E or Method 20 for EUs H-241, H-1001, H-8001, and H-5006, in accordance with Section 7, Conditions 107 through 116, within one year of permit issuance at the maximum rated burning or operating capacity, unless such source tests have been performed within the last 6 years of the date of permit issuance and as follows:

a. During the source test, measure the type and amount of fuel consumed and use the fuel type or combination of fuel types that,

(i) except for the test for H-5006, has the greatest HHV, per pound of fuel, of any fuel type that will be used by the EU after the source test; and

(ii) for the H-5006 source test, has the greatest HHV, per pound of fuel, of any fuel type that will be used by any EU in Group 3 after the source test.

b. For H-241, H-1001, H-8001, H-8002, and H-5006, calculate and record, using Equation 1, the emission rate, in lb of NOx/MMBtu, based on the HHV of the fuel type used. The results of the source test for H-5006 shall represent all EUs in Group 3.

16.4 After the source tests required in Condition 16.3 have been performed, and except for subsequent emission source test purposes,

a. do not use a fuel or combination of fuels with a higher heat content than the fuel type or combination of fuel types with which compliance with Table 1 was demonstrated for that EU, except for the EUs in Group 3;

b. do not use a fuel or combination of fuels in any EUs in Group 3 with a higher heat content than the fuel or combination of fuel types with which compliance with Table 1 was demonstrated for H-5006;

c. for each of EU names H-241, H-1001, H-8001, and those in Group 3, retest if firing at an hourly firing rate greater than that for which compliance with the emission rate limits in Condition 16 was demonstrated by the source test for that EU under Condition 16.3;

d. the hourly firing rate in condition 16.4c shall be evaluated at the beginning of each month and calculated as the hourly firing rate averaged during the previous calendar month over periods while the EU was operating without taking into account periods of down time; and

e. the Permittee shall report under Condition 122 when the hourly firing rate calculated under Condition 16.4d is greater than that for which compliance with the emission rate limits in Condition 16 was demonstrated by the source test for that emission unit under Condition 16.3.

16.5 The Permittee shall operate the heater EU name H-8001 with low-NOx burners.

16.6 Compare the results recorded under Condition 16.2c to the annual NO_X emissions and annual fuel consumption or heat input limits, and the emission rate results recorded under Condition 16.3 to the emission rates recorded in Table 1, and report the comparative results under Condition 122. Include in the report:

a. a list of the monthly total and 12-month rolling total emissions, in ton/month and ton/12-months, from each EU in Groups 1, 3, 5, and 6; and

b. a list of the monthly total and 12-month rolling total fuel consumption, in bbl/yr or MMBtu/yr, from the EUs in Group 3.

16.7 Report any exceedances demonstrated in Condition 16 in accordance with Condition 121.

[18 AAC 50.040(j), & 18 AAC 50.326(j)(4)]
[Air Quality Control Construction Permit No. 9831-AC005 Condition III.A.2]

NOx Limit for EU ID H-2001

17. The Permittee shall comply with the following conditions:

[]

17.1 Limit the NOx emissions from EU ID H-2001 to no more than 20.3 pounds-per-hour (lb/hr) averaged over one calendar month.

a. Monitor and record hourly NOx emissions of H-2001 using the CEMS.

b. Record the number of hours H-2001 operated during the calendar month.

c. Calculate, for each month, the emission rate, in lb/hr, averaged over one calendar month.

d. Report the emission rate calculated in Condition 17.1c for each month of the reporting period as described in Condition 122.

e. Report as a permit deviation, as described in Condition 132, if the hourly NOx emissions exceed the limit in Condition 16.

[Air Quality Control Minor Permit No. AQ0071MSS04]

17.2 **Source Testing.** Install; calibrate; conduct continuous monitoring system Performance Specification 2 tests listed in 40 C.F.R. 60, Appendix B as if applicable to an affected facility. Certify test results; operate; and maintain air contaminant emissions and process monitoring equipment on the sources as described in documents to be submitted and provided by the Permittee, subject to approval by the Department. Conduct quality assurance procedures for gas continuous emission monitoring systems used for compliance determination listed in 40 C.F.R. 60, Appendix F, as if applicable to an affected facility. Comply with monitoring requirements listed in 40 C.F.R. 60.13 as if applicable to an affected facility. Submit monitoring equipment siting, operation, and maintenance plans for approval by the Department 60 days prior to startup of EU H-2001. Within 60 days after completing relative accuracy test audit (RATA), cylinder gas audit (CGA) or relative accuracy analysis (RAA), submit report of the test results in the format set out in the Source Test Report Outline, adopted by reference in 18 AAC 50.030(8).

17.3 **Monitoring Requirement.** For CEMS, comply with 40 C.F.R. 60 Subpart A; and periodic *Quality Assurance Procedures in Appendix F*; and the *EPA Quality Assurance Handbook for Air Pollution Measurements, EPAl6OO R-94/038b*, effective July 1, 1997, during periods of heater operation. Concentration measurements provided by the CEMS shall be used to directly determine compliance with applicable NOx emission limits on a continuous basis.

Owner Requested Limits to Avoid HAP-Major Status

18. The Permittee shall maintain the stationary source-wide emissions of all hazardous air pollutants (HAPs) at less than 25 tons-per-year (tpy), and the stationary source-wide emissions of any one HAP at less than 10 tpy.

18.1 Monitor, report and record the emissions of HAPs in accordance with the procedures outlined in Condition 19 when operating as a bulk petroleum terminal for 12 months, or

18.2 those outlined in Condition 20 when operating as an oil refinery.

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

19. Bulk Petroleum Terminal Operating Scenario. When operating under the bulk petroleum terminal operating scenario, the Permittee shall limit, monitor, record, and report product loading as follows:

19.1 Load no more than 35,000,000 barrels per 12-month rolling period.

19.2 Each month, calculate the 12-month rolling total loading throughput for the previous month.

19.3 Each month, verify that no units within EU Groups 1, 2, or 4 through 7 operated during the previous 12 months.

19.4 Keep any applicable records required by Condition 117.2.

19.5 Report under Condition 121 if the 12-month rolling total loading exceeds the limit established in Conditions 18 and 1.1.

19.6 Include the 12-month rolling total loading for each month in the reporting period with the facility operating report required under Condition 122.

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

20. Oil Refinery Operating Scenario. When operating under the oil refinery operating scenario, the Permittee shall monitor, record, and report HAP emissions as follows:

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

20.1 With exception of valves, pumps, wastewater, and loading racks, the Permittee shall obtain a permit amendment that revises this condition before constructing or modifying any equipment in a way that will increase the refinery's PTE HAPs.

20.2 For valves in gas/vapor service and light liquid service, comply with Condition 72.2.

20.3 **HAP Concentration of Process Stream.** Measure the weight fraction of the liquid HAPs (WF_{HAP}) concentration for each process stream at least once every 24 calendar months as follows:

a. Except as provided under Condition 1.11.1a, sample each process stream and analyze each sample using ASTM method 6730 or EPA Method 8260C.

b. Test results using Method 5134 may be used to measure the weight fraction of the liquid hazardous air contaminant pollutants (WF_{HAP}) concentration for each process stream for the first 24 calendar months after the issue date of this permit[9].

c. If it is not possible to obtain a sample from a given process stream, use an adequate mass balance equation for combined process streams to calculate accurately the WF_{HAP} concentration. Maintain hard copy records of all measurements done under this condition including the reasons why a measurement under condition 1.1a above was not feasible.

20.4 **Pumps.** Each month, calculate the actual stationary source-wide monthly HAP emissions from pumps as follows.

a. For each pump in light liquid service:

(i) Monitor as required by Condition 67.

[9] Process stream HAP concentrations were based on ASTM method 5134, as modified by Williams (now FHR), in Title V permit AQ0071TVP02.

(ii) Use the screening values from each monthly pump inspection required in Condition 67.1 to calculate monthly HAP emissions for each pump in light liquid service separately, using .

Equation 2 $HAP_{eachpump} = WF_{HAP} \times D \times 24 \, {}^{hr}\!/_{day} \times 2.2 \, {}^{lb}\!/_{kg} \times ER$

Where:

$HAP_{each\ pump}$ = monthly HAP emissions from each pump (lb/mo/pump)
WF_{HAP} = the weight fraction of HAP in the liquid passing through that pump (from condition 1.1),
D = the number of days in that month, and
ER = (A), (B), or (C) below, depending on the screening value:

(A) 2.4×10^{-5} kg VOC/hr/pump (from *EPA Protocol for Equipment Leak Estimates*, Table 2-12), if the screening value for the pump from condition 1.1a is less than 1 ppmv;

(B) 0.160 kg VOC/hr/pump(from *EPA Protocol for Equipment Leak Estimates*, Table 2-14), if the screening value is greater than or equal to 100,000 ppmv, a sensor on a dual seal-barrier fluid system indicates a leak, or if fluids are observed dripping from the pump; or

(C) $5.03 \times 10^{-5} \times SV^{0.61}$ kg VOC/hr/pump (from *EPA Protocol for Equipment Leak Estimates*, Table 2-10), if the screening value is greater than or equal to 1 ppmv and less than 100,000 ppmv, and where SV is the screening value in ppmv.

b. For each pump in heavy liquid service, calculate monthly HAP emissions using *EPA Protocol for Equipment Leak Estimates*.

c. Calculate the actual facility-wide monthly HAP emissions for all pumps using .

Equation 3 $$HAP_{all\ pumps} = \frac{\sum HAP_{each\ pump}}{2000}$$

Where

$HAP_{all\ pumps}$ = the total HAP emissions for all pumps for the month (tons/mo).

20.5 **Wastewater.** Each month, calculate the actual stationary source-wide monthly HAP emissions from wastewater as follows:

a. Groundwater Remediation.

(i) Except as provided under condition 1.1a(i) below, once a month, and with at least two weeks between sample times, measure the following for the groundwater air strippers that are operating on the date samples are taken:

(A) Concentration, in ppb, of influent benzene (Binf), toluene (Tinf), ethylbenzene (Einf), xylene (Xinf), and naphthalene (Ninf).

(B) Concentration, in ppb, of effluent benzene (Beff), toluene (Teff), ethylbenzene (Eeff), xylene (Xeff), and naphthalene (Neff).

(ii) For each groundwater air strippers where the sampling interval under condition 1.1a(i) cannot be met, the Permittee shall measure the parameters under 1.1a(i)(A) and 1.1a(i)(A) once a month if that stripper operates during that month.

(iii) Calculate the monthly HAP emissions from groundwater remediation using .

Equation 4

$$HAP_{GR} = \sum_{A}^{D}\left[\frac{\left(B_{\inf} - B_{eff}\right)+\left(E_{\inf} - E_{eff}\right)+\left(T_{\inf} - T_{eff}\right)+\left(X_{\inf} - X_{eff}\right)+\left(N_{\inf} - N_{eff}\right)}{1\times10^{9}}\times Q\times\frac{8.34\ lb}{gal}\right]$$

Where

HAP_{GR} = HAP emissions from groundwater remediation in lb/mo from each air stripper A through D

Q = Total flow in gallons for the month from all air strippers A through D, from flow meters

b. Process Wastewater - CTX boxes.

(i) Once a month, and with at least two weeks between sample times, measure the following for the CTX boxes:

(A) Concentration, in ppb, of influent benzene (B_{inf}), toluene (T_{inf}), ethylbenzene (E_{inf}), and xylene (X_{inf}).

(B) Concentration, in ppb, of effluent benzene (B_{eff}), toluene (T_{eff}), ethylbenzene (E_{eff}), and xylene (X_{eff}).

(ii) Once in each six months, and with at least four months between sample times, measure the following for the CTX boxes.

(A) Concentration, in ppb, of influent naphthalene (N_{inf}).

(B) Concentration, in ppb, of effluent naphthalene (N_{eff}).

(iii) Calculate the monthly HAP emissions from the CTX boxes using . For naphthalene, use results from the most recent sampling.

Equation 5

$$HAP_{CTX} = \frac{\left(B_{\inf} - B_{eff}\right)+\left(E_{\inf} - E_{eff}\right)+\left(T_{\inf} - T_{eff}\right)+\left(X_{\inf} - X_{eff}\right)+\left(N_{\inf} - N_{eff}\right)}{1\times10^{9}}\times\frac{8.34\ lb}{gal}\times Q\times 0.8$$

Where

HAP_{CTX} = HAP emissions from CTX boxes in lb/mo

Q = Total flow in gallons for the month, from flow meters

0.8 = Based on effectiveness of the CTX boxes (20-percent effectiveness)

c. Process Wastewater Air Strippers.

(i) Once a month, and with at least two weeks between sample times, measure the following for the process wastewater air strippers:

(A) Concentration, in ppb, of influent benzene (B_{inf}), toluene (T_{inf}), ethylbenzene (E_{inf}), and xylene (X_{inf}).

(B) Concentration, in ppb, of effluent benzene(B_{eff}), toluene (T_{eff}), ethylbenzene (E_{eff}), and xylene (X_{eff}).

(ii) Once in each six months, and with at least four months between sample times, measure the following for the process wastewater air strippers.

(A) Concentration, in ppb, of influent naphthalene (N_{inf}).

(B) Concentration, in ppb, of effluent naphthalene (N_{eff}).

(iii) Calculate the monthly HAP emissions from the process wastewater air strippers using . For naphthalene, use results from the most recent sampling.

Equation 6

$$HAP_{PWAS} = \frac{\left(B_{\text{inf}} - B_{eff}\right) + \left(E_{\text{inf}} - E_{eff}\right) + \left(T_{\text{inf}} - T_{eff}\right) + \left(X_{\text{inf}} - X_{eff}\right) + \left(N_{\text{inf}} - N_{eff}\right)}{1 \times 10^{9}} \times Q \times \frac{8.34\ lb}{gal}$$

Where
HAP_{PWAS} = HAP emissions from process wastewater air strippers in lb/mo
Q = Flow in gallons for the month, from flow meters

d. Calculate the actual facility-wide monthly HAP emissions from wastewater using .

Equation 7 $$HAP_{WW} = \frac{HAP_{GR} + HAP_{CTX} + HAP_{PWAS}}{2000}$$

Where
HAP_{WW} = the total monthly HAP emissions from wastewater (tons/mo)

20.6 **Loading Racks.** Each month, calculate the actual stationary source-wide monthly HAP emissions from loading racks as follows.

a. Record the amount in barrels (bbl) of each product loaded each calendar month. Keep separate records for rail loading and truck loading, and record whether vapor recovery was used.

b. For all loading, the vapor generation rate for any liquid is calculated using :

Equation 8 $$L_L = 12.46 \times \frac{SPM}{T}$$

Where
L_L = vapor generation rate (lb/1000 gallons)
S = saturation factor – from AP-42 Table 5.2-1
P = true vapor pressure of the liquid loaded (psia)

M = molecular weight (lb/lb-mole)
T = temperature of liquid loaded (^oR)

c. For loading without vapor collection, the HAP emissions for any liquid are calculated using :

Equation 9 $$HAP_{NoVR_i} = L_{L_i} \times V_{HAP_i} \times bbl_i \times \frac{42}{2000} \times \frac{1}{1000}$$

Where
$HAP_{No\ VRi}$ = monthly HAP emissions for loading without vapor recovery for liquid *i* (tons/mo)
L_{Li} = vapor generation rate for liquid *i* (lb/1000 gallons)
V_{HAPi} = proportion hazardous air contaminant in the generated vapor (lb HAP/lb vapor), calculated from liquid i HAP content using Raoult's Law
bbl_i = barrels of liquid *i* loaded per month

d. For rail loading with vapor collection through EU ID Group 11, the HAP emissions for any liquid are calculated using :

Equation 10 $$HAP_{Rail\ VR_i} = V_{HAP_i} \times ER2 \times bbl_{2i} \times \frac{42 \times 3.785}{2000 \times 454{,}000}$$

Where
$HAP_{Rail\ VRi}$ = monthly HAP emissions from rail loading with vapor recovery for liquid *i* (tons/mo)
V_{HAPi} = proportion hazardous air contaminant in the generated vapor (lb HAP/lb vapor), calculated from liquid HAP content using Raoult's Law
$ER2$ = the emission rate (mg VOC/L) of gasoline loaded from the most recent source test required by condition 42.1 for VRU#2.
bbl_{2i} = barrels of liquid *i* loaded per month for VRU #2

e. For truck loading with vapor collection, the vapor generation rate for any liquid is calculated using :

Equation 11

$$HAP_{TruckVR_i} = \left[V_{HAP_i} \times ER1 \times bbl_{1i} \times \frac{42 \times 3.785}{2000 \times 454{,}000}\right] + \left[V_{HAP_i} \times ER2 \times bbl_{2i} \times \frac{42 \times 3.785}{2000 \times 454{,}000}\right] + \left[0.013 \times L_{L_i} \times V_{HAP_i} \times bbl_i \times \frac{42}{2000}\right]$$

Where
$HAP_{Truck\ VRi}$ = monthly HAP emissions from truck loading with vapor recovery for liquid *i* (tons/mo)

ER1 = the emission rate (mg of VOC/L) of gasoline loaded from the most recent source test required under condition 42.1 for VRU#1.

ER2 = the emission rate (mg VOC/L) of gasoline loaded from the most recent source test required by condition 42.1 for VRU#2.

bbl_{1i} = barrels of liquid *i* loaded per month for VRU #1

bbl_{2i} = barrels of liquid *i* loaded per month for VRU #2

f. Using the results from conditions 1.1a, 1.1a, and 1.1a, calculate the actual facility-wide monthly HAP emissions from loading racks using .

Equation 12 $HAP_{all\ LR} = HAP_{NoVR_i} + HAP_{RailVR_i} + HAP_{TruckVR_i}$

Where

$HAP_{all\ LR}$ = monthly HAP emissions for loading racks (tons/mo)

20.7 **Storage Tanks.** Each month, calculate the actual stationary source-wide monthly HAP emissions from each storage tank using EPA's TANKS program with partial speciation. Calculate the one-month HAP total for all storage tanks (HAP_{Tanks}).

20.8 **Combustion Sources.** Each month, calculate the actual stationary source-wide monthly HAP emissions from each combustion source using site-specific test results and/or standard HAP emissions factors for combustion sources. Calculate the one-month HAP total for all combustion sources (HAP_C).

20.9 **Monthly Actual HAP Emissions from Pumps, Waste Water, Loading Rack, Storage Tanks, and Combustion Sources.** Calculate and record the total actual HAP emissions from Pumps, Waste Water, Loading Rack, Storage Tanks, and Combustion Sources for each month using Equation 13 as follows:

Equation 13 $HAP_{1month} = HAP_{allPumps} + HAP_{WW} + HAP_{allLR} + HAP_{Tanks} + HAP_C$

Where

$HAP_{1\ month}$ = Total HAP emissions from pumps, wastewater units, loading racks, storage tanks and combustion sources for that month (tons/mo).

$HAP_{allPumps}$ = Sum of actual monthly HAP emission from pumps, as calculated under .

HAP_{WW} = Sum of actual monthly HAP emission from wastewater, as calculated under .

HAP_{allLR} = Sum of actual monthly HAP emission from loading racks, as calculated under .

HAP_{Tanks} = Sum of actual monthly HAP emission from storage tanks, as calculated under Condition 1.1.

HAP_C = Sum of actual monthly HAP emission from combustion sources, as calculated under Condition 1.1.

20.10 **Valves.** Calculate the actual stationary source-wide annual HAP emissions from valves as follows:

a. For each valve in light liquid service:

(i) Monitor as required by Condition 72.

(ii) Use the screening values from the most recent performance test to calculate annual HAP emissions for each valve in light liquid service, separately, using .

Equation 14 $HAP_{eachvalve} = WF_{HAP} \times 2.2 \, {}^{lb}\!/_{kg} \times ER$

Assuming 8760 hr/yr, and where
$HAP_{each\ valve}$ = annual HAP emissions from each valve (lb/yr/valve)
WF_{HAP} = the weight fraction of HAP in the liquid passing through that valve (from condition 1.1), and
ER = (A), (B), or (C) below, depending on the screening value:

(A) 7.8×10^{-6} kg VOC/hr/valve (from *EPA Protocol for Equipment Leak Estimates,* Table 2-12), if the screening value for the valve from condition 1.1a is less than 10.3 ppmv;

(B) 0.14 kg VOC/hr/valve (from *EPA Protocol for Equipment Leak Estimates,* Table 2-14), if the screening value for the valve from condition 1.1a is greater than or equal to 100,000 ppmv, or if liquids are observed dripping from the valve; or

(C) $2.29 \times 10^{-6} \times SV^{0.746}$ kg VOC/hr/valve (from *EPA Protocol for Equipment Leak Estimates,* Table 2-10), if the screening value is greater than or equal to 10.3 ppmv and less than 100,000 ppmv, and where SV is the screening value in ppmv.

b. For each valve in heavy liquid service, calculate monthly HAP emissions using *EPA Protocol for Equipment Leak Estimates.*

c. Calculate the actual stationary source-wide annual HAP emissions from all valves using .

Equation 15 $HAP_{all\ valves} = \dfrac{\sum HAP_{eachvalve}}{2000}$

Where
$HAP_{all\ valves}$ = actual annual HAP emissions from all valves (TPY).

d. Do not recalculate stationary source-wide valve emissions based on quarterly valve monitoring.

20.11 **Drains.** Once each calendar year, calculate and record the actual stationary source-wide annual HAP emissions from drains as follows:

a. For each drain, calculate annual HAP emissions, separately, using .

Equation 16 $HAP_{EachDrain} = WF_{HAP} \times 2.2 \, {}^{lb}\!/_{kg} \times ER \times 8{,}760 \, {}^{hr}\!/_{yr}$

Where
$HAP_{each\ Drain}$ = annual HAP emissions from each drain (lb/yr/drain).
WF_{HAP} = the weight fraction of HAP as determined by averaging the HAP compositions of all light and heavy liquid streams, and

ER = 1.4 x 10^{-2} kg VOC/hr/drain (from EPA Protocol for Equipment Leak Estimates Table 2-4):

b. Calculate the actual facility-wide annual HAP emissions from all drains using .

Equation 17 $$HAP_{all\ Drain} = \frac{\sum HAP_{each\ Drain}}{2000}$$

Where
$HAP_{all\ drains}$ = actual annual HAP emissions from all drains (TPY).

20.12 **Flanges.** Once each calendar year, calculate and record the actual stationary source-wide annual HAP emissions from flanges as follows:

a. For each flange, calculate annual HAP emissions, separately, using .

Equation 18 $$HAP_{EachFlange} = WF_{LLHAP} \times 2.2 \frac{lb}{kg} \times ER \times 8{,}760 \frac{hr}{yr}$$ **or**

$$HAP_{EachFlange} = WF_{HLHAP} \times 2.2 \frac{lb}{kg} \times ER \times 8{,}760 \frac{hr}{yr}$$

Where
$HAP_{eachFlange}$ = annual HAP emissions from flanges (lb/yr/flange).
WF_{LLHAP} = the weight fraction of HAP as determined by averaging the HAP compositions of all light liquid streams, and
WF_{HLHAP} = the weight fraction of HAP as determined by averaging the HAP compositions of all heavy liquid streams, and
ER = 2.5 x 10^{-4} kg VOC/hr/flange (from EPA Protocol for Equipment Leak Estimates Table 2-2):

b. Calculate the actual stationary source-wide annual HAP emissions from all flanges using .

Equation 19 $$HAP_{all\ Flanges} = \frac{\sum HAP_{each\ Flange}}{2000}$$

Where
$HAP_{all\ Flanges}$ = actual annual HAP emissions from all flanges (TPY).

20.13 **Asphalt Storage Tanks.** Each month, calculate the actual monthly HAP emissions from each asphalt storage tank in EU Group 12 using EPA's TANKS program.

a. In addition to any applicable records required by Condition 117.2, maintain records of the calculations required by Condition 1.1.

b. Include a copy of the calculations required by Condition 1.1 with the facility operating report required under Condition 122.

20.14 **Total 12-Month HAP Emissions.** Each month, calculate and record the 12 month rolling total HAP emissions to determine compliance with the total HAP emission limit in Condition 18, using either , or the alternative calculation method listed in Condition 1.1a.

Equation 20

$$HAP_{12-Month} = HAP_{1Month} + \sum^{Last11Months} HAP_{1Month} + HAP_{allValves} + HAP_{allDrains} + HAP_{allFlanges} + HAP_{S} + HAP_{AT}$$

Where

$HAP_{12\text{-}Month}$ = 12 month rolling total HAP emissions for the stationary source (tons)

$HAP_{1\ month}$ = 1 month total HAP emissions from pumps, waste water units, storage tanks, combustion units and loading racks for that month (tons).

$\sum^{Last11Months} HAP_{1Month}$ = Total of the preceding 11-month HAP emissions from pumps, wastewater units, loading racks, combustion units and storage tanks (tons)

$HAP_{allValves}$ = actual annual HAP emissions from all valves (tons).

$HAP_{allDrains}$ = actual annual HAP emissions for drains (tons).

$HAP_{allFlanges}$ = actual annual HAP emissions for flanges (tons).

HAP_{S} = annual PTE for small emission units (0.3 tons)

HAP_{AT} = actual annual HAP emissions for asphalt tanks (tons)

a. As an alternative to the calculation methodology described in the rest of Condition 1, the 12 month rolling total HAP emissions for any month in which any unit within Groups 1-2 or 4-7 were not operated can be calculated using .

Equation 21 $$HAP^{\text{Non-Refining}}{}_{1Month} = \frac{HAP^{\text{Non-Refining}}{}_{12-Month\,PTE}}{12}$$

Where

$HAP^{\text{Non-Refining}}{}_{1Month}$ = monthly potential HAP emissions for non-refining operation

$HAP^{\text{Non-Refining}}{}_{12-Month\,PTE}$ = total annual potential HAP emissions

The resulting 12 month rolling total HAP emissions calculation would follow .

Equation 22 $$HAP^{Alternative}_{12-Month} = HAP_{1Month} + \left(\sum_{i}^{Last1Months} HAP_{iMonth} \right)^{\text{Refining}} + HAP^{\text{Non-Refining}}{}_{1Month} \times j$$

Where

i is any month with refinery operations as calculated under Condition 1

j is the number of months under non-refining operation

$HAP^{Alternative}_{12-Month}$ = 12-month rolling total HAP emissions for the stationary source (tons) using the alternative method

20.15 Keep any applicable records required by Condition 117.2.

20.16 Report under Condition 121 if the 12-month rolling total HAP emissions for the stationary source equals or exceeds 25 tons or 10 tons of a single HAP.

20.17 Include the 12-month rolling total and single HAP emissions for each month in the reporting period with the facility operating report required under Condition 122.

Insignificant EUs

21. For EUs 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:

21.1 The Permittee shall submit the certification of compliance of Condition 123 based on reasonable inquiry;

21.2 The Permittee shall comply with the requirements of Condition 104;

21.3 The Permittee shall report in the operating report required by Condition 122 if an EU is insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and actual emissions become greater than any of those thresholds;

21.4 No other monitoring, recordkeeping or reporting is required.

[18 AAC 50.346(b)(4)]

22. 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) & 18 AAC 50.055(a)(1)]

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

[18 AAC 50.055(b)(1)]

24. 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)]

Section 5. Federal Requirements

EUs Subject to Federal New Source Performance Standards (NSPS), Subpart A

25. NSPS Subpart A Notification. For any affected facility[10] or existing facility[11] regulated under the NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Department and U.S. Environmental Protection Agency (EPA) written or electronic notification of:

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

25.1 the date that construction or reconstruction of an affected facility commences postmarked no later than 30 days after such a date, except for facilities that are mass-produced and purchased in complete form;

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

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

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

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

a. information describing the precise nature of the change;

b. present and proposed emission control systems;

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

d. the expected completion date of the change;

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

25.4 the date of a continuous monitoring system (CMS) performance demonstration[12], postmarked not less than 30 days prior to such date;

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

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

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

a) the name and address of owner or operator,

[10] *Affected facility* means, with reference to a stationary source, any apparatus to which a standard applies, as defined in 40 C.F.R. 60.2, effective 7/1/07.

[11] *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, effective 7/1/07.

[12] Commenced in accordance with 40 C.F.R. 60.13(c).

b) the location of the existing facility;

c) a brief description of the existing facility and the components that are to be replaced;

d) a description of the existing and proposed air pollution control equipment;

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

f) the estimated life of the existing facility after the replacements; and

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

26. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements. The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU Groups 1 through 6, 8, and 12 through 27, any malfunctions of associated air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU Groups 1 through 6, 8, and 12 through 27 is inoperative.

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

27. NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report. If any standards referenced in 40 C.F.R. 60 that require installation of continuous emissions monitoring devices are applicable during any semi-annual period, except as provided for in Condition 28, the Permittee shall submit to the Department and to EPA a written "excess emissions and monitoring systems performance report " (EEMSP)[13] any time the limits in conditions associated with compliance with NSPS standards have been exceeded, as described in this condition. The Permittee shall submit the EEMSP reports to EPA semi-annually, postmarked no later than 30 days after the end of the semi-annual period. Excess emission reports shall include the following information:

[18 AAC 50.040(a)(1), 7/25/08]
[40 C.F.R. 60.7(c), Subpart A, 7/1/07]

27.1 The magnitude of excess emissions computed in accordance with 40 C.F.R. 60.13(h), any conversion factor(s) used, the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.

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

27.1 The identification of each period of excess emissions that occurred during startup, shutdown, and malfunction of the affected facility, and the nature and cause of any malfunction, and the corrective action taken or preventative measures adopted.

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

27.2 The date and time identifying each period during which the CMS was inoperative, except for zero and span checks, and the nature of the system repairs or adjustments.

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

[13] The Federal EEMSP report is not the same as the State excess emission report required by Condition 132.

27.3 A statement indicating whether or not any excess emissions occurred or the CMS was inoperative, repaired, or adjusted, at any time during the reporting period.

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

28. NSPS Subpart A Summary Report Form. The Permittee shall submit to the Department and to EPA one "summary report form" in the format shown in Figure 1 of 40 C.F.R. 60.7 for each pollutant monitored through a continuous emission monitoring device required by 40 CFR 60 for EU Groups 1, 4, 5, 6, and 8. The report shall be submitted semi-annually, postmarked by the 30th day following the end of each 6-month period, except when more frequent reporting is specifically required by an applicable subpart, case-by-case basis, or the EPA, as follows:

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

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

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

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

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

29. NSPS Subpart A Performance (Source) Tests. The Permittee shall conduct initial source tests according to Section 7 and as indicated in this condition on any affected facility within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after initial startup, and at such other times as may be required by EPA, and shall provide the Department and EPA with a written report of the results of the source test. The Permittee shall:

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

29.1 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]

29.2 Notify the Department and EPA at least 30 days in advance of the performance test.

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

29.3 Provide adequate sampling ports, safe sampling platform(s), safe access to sampling platform(s), and utilities for sampling and testing equipment.

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

30. NSPS Subpart A Good Air Pollution Control Practice. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU Groups 1 through 6, 8, 10, and 12 through 26 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 to the Department which may include, but is not limited to, monitoring results, opacity observations, reviews of operating and maintenance records, and inspections of EU Groups 1 through 6, 8, 10, and 12 through 26. Emissions in excess of the applicable limit during periods of startup, shutdown, and malfunction shall not be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

[18 AAC 50.040(a)(1)]
[40 C.F.R. 60.11(d), Subpart A]
[40 C.F.R. 60.8(c), Subpart A]

31. NSPS Subpart A Credible Evidence. For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 36 and 61, nothing in 40 C.F.R. 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU Groups 1 through 6, 8, 10, and 12 through 26 would have been in compliance with applicable requirements of 40 C.F.R. 60 if the appropriate performance or compliance test or procedure had been performed.

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

32. NSPS Subpart A Concealment of Emissions. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Conditions 36 and 61. 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]

33. NSPS Subpart A Monitoring Requirements. For the CEMS for EU Groups 1, 4, 5, 6, and 8 check the zero (or low level value between 0- and 20-percent of span value) and span (50- to 100-percent of span value) calibration drifts at least once daily in accordance with a written procedure.

[18 AAC 50.040(j) & 18 AAC 50.326(j)]

33.1 All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under 40 C.F.R. 60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.

[40 C.F.R. 60.13(b)]

33.2 Adjust the zero and span, as a minimum, whenever either the 24-hour zero drift or the 24-hour span drift exceeds 2.5 ppm for the SO_2 monitor and 1.25% for the O_2 monitor.

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

33.3 Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, operate the CEMS continuously by completing 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)]

33.4 All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of Appendix B of 40 C.F.R. 60 shall be used.

[40 C.F.R. 60.13(f)]

33.5 Reduce CEMS data and calculate hourly averages in accordance with 40 C.F.R. 60.13(h) for SO_2 emissions and H_2S concentrations.

[40 C.F.R. 60.13(h)]

33.6 After initial installation or relocation of any CEMS required under this permit, the Permittee shall follow the performance evaluation requirements for new installations under 40 C.F.R. 60, Appendix B.

Steam Generating Units Subject to NSPS Subpart Dc

34. NSPS Subpart Dc Notification Requirement. The Permittee of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by 40 C.F.R. 60.7 (Condition 25). This notification shall include:

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

34.1 The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

[40 C.F.R. 60.48c(a)(1), Subpart Dc]

34.2 If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under 40 C.F.R. 60.42c, or 40 C.F.R. 60.43c.

[40 C.F.R. 60.48c(a)(2), Subpart Dc]

34.3 The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

[40 C.F.R. 60.48c(a)(3), Subpart Dc]

34.4 Notification if an emerging technology will be used for controlling SO_2 emissions.

[40 C.F.R. 60.48c(a)(4), Subpart Dc]

35. NSPS Subpart Dc Fuel Consumption. For EU Groups 2 and 3, the Permittee shall record the amounts of each fuel combusted during each day and maintain the records as required by Condition 117 following the date of such record; or monitor according to the Alternative Monitoring Plan in Section 14.

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

36. NSPS Subpart Dc Sulfur Standards. At all times, including periods of startup, shutdown, and malfunction, for EU Groups 2 and 3 the Permittee shall either emit less than 0.5 lb of SO_2/MMBtu of fuel combusted, or shall combust fuel oil that contains less than 0.5 percent sulfur by weight. Monitor, record and report in accordance with Condition 1.1.

[18 AAC 50.040(a)(2)(D)]
[40 C.F.R. 60.42c(d), Subpart Dc]

36.1 For EU Groups 2 and 3, demonstrate compliance with the applicable fuel sulfur content limits as consistent with NSPS Dc requirements, or monitor the fuel sulfur contents using the procedures for monitoring liquid fuels in the document titled *Alternate Monitoring Plan to Comply with NSPS Dc Monitoring Requirements* (Appendix A, effective December 21 1998, in Section 16)[14] and report as follows:

[18 AAC 50.040(J) & 18 AAC 50.326(j)(4)]
[40 C.F.R. 60.100 Subpart J]

a. If the sulfur concentration in the fuel exceeds 0.2 wt% sulfur, the Permittee shall report under Condition 121.

b. The Permittee shall include in the report required by Condition 122

(i) a list of the fuel grades used for EU Groups 2 and 3 during the reporting period;

(ii) the results of monthly grab samples from all fuel sources for Groups 2 and 3, or copies of certifications from the fuel supplier if determining compliance following the procedures in 40 C.F.R. 60.42(h) and 40 C.F.R. 60.48(f);

(iii) a log recording when fuel sample results indicated that the sulfur content exceeded 0.2 wt%; and

(iv) for fuel with a sulfur content greater than 0.2 percent, the calculated SO_2 emissions in ppm.

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

Petroleum Liquid Storage Tanks Subject to NSPS Subpart K

37. NSPS Subpart K Requirements

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

[14] EPA approved AMP for reduced sampling frequency on February 9, 2006.

37.1 If the petroleum liquid stored in the storage tanks in EU Group 13 has a true vapor pressure[15] less than 11.1 pounds-per-square inch, absolute (psia), or 76.6 kilo-Pascal (kPa), the storage tank shall be equipped with a floating roof, a vapor recovery system or their equivalents.

[40 C.F.R. 60.112(a)(1)]

37.2 If the petroleum liquid stored in the storage tanks in EU Group 13 has a true vapor pressure greater than 11.1 psia, or 76.6 kPa, the storage tank shall be equipped with a vapor recovery system or its equivalent.

[40 C.F.R. 60.112(a)(2)]

37.3 At least once in every 12 months, inspect each storage tank in EU Group 13 to see if the roof is floating, is in good repair, and does not have petroleum liquid accumulated on it. If the roof is not floating, has substantial defects, or has petroleum liquid accumulated on it, correct the problem as soon as practicable. Keep records of the dates and nature of any repairs made.

[40 C.F.R. 60.11(d)]

37.4 For each EU Group 13 tank, determine the true vapor pressure of the petroleum liquid stored in each tank using the equilibrium partial pressure exerted by the stored petroleum liquid as determined in accordance with methods described in American Petroleum Institute Bulletin 2517. 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 or the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

[40 C.F.R. 60.111(i) & 40 C.F.R. 113(b)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

37.5 In addition to any applicable records required by Condition 117.2, maintain records of:

a. each petroleum liquid stored;

b. the period of storage for the liquid; and

c. the maximum true vapor pressure of that liquid during the respective storage period.

[40 C.F.R. 60.113(a)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

37.6 Report under Conditions 121 and 122 if at any time the true vapor pressure of the contents in any of the storage tanks in EU Group 13 exceed 11.1 psia, and the corresponding storage tank does not meet the requirements under Condition 37.2.

[40 C.F.R. 60.11(d)]

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

[15] *True vapor pressure* has the meaning given in 40 C.F.R. 60.111(f).

37.7 Include with the facility operating report required under Condition 122 the maximum true vapor pressure for the reporting period for each tank.

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

Subpart Ka - Storage Vessels for Petroleum Liquids-

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

[18 AAC 50.040(a)(2)(L)]
[40 C.F.R. 60.112a, Subpart Ka]

38.1 For EU Group 14, storage vessels meeting the design requirements specified in 40 C.F.R. 60.112a(a), the Permittee shall equip each with one of the following:

a. an external floating roof as described in 40 C.F.R. 60.112a(a)(1);

b. a fixed roof with an internal floating type cover, as described in 40 C.F.R. 60.112a(a)(2);

c. a vapor recovery system, as described in 40 C.F.R. 60.112a(a)(3); or

d. a system equivalent to those described in Conditions 38.1a, 38.1b, or 38.1c as provided in 40 C.F.R. 60.114a.

[40 C.F.R. 112a(a), Subpart Ka]

38.2 For EU Group 14, storage vessels meeting the design requirements specified in 40 C.F.R. 60.112a(b), the Permittee shall equip each 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.

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

38.3 The following are exempt from the monitoring requirements of this condition:

a. Storage vessels storing a petroleum liquid with a Reid vapor pressure of less than 6.9 kPa (1.0 psia) provided the maximum true vapor pressure does not exceed 6.9 kPa (1.0 psia); and

b. Storage vessel(s) equipped with a vapor recovery and return or disposal system in accordance with the requirements of Conditions 38.1c and 38.2 (40 C.F.R. 60.112a(a)(3) and (b)).

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

38.4 **Monitoring**. The Permittee shall comply with the following:

[40 C.F.R. 60.115a(b), & (c) & 60.113a(a)(1), Subpart Ka]

a. Determine the maximum true vapor pressure of the petroleum liquid stored as follows:

(i) Using the equilibrium partial pressure exerted by the stored petroleum liquid as determined in accordance with methods described in API Bulletin 2517. 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 or the Administrator 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 is to be determined from available data.

b. Depending on the type of control device chosen in Condition 38.1, compliance with the corresponding standard shall be determined accordingly as provided in 40 C.F.R. 60.113a(a)(1).

38.5 **Recordkeeping.** The Permittee shall

[40 C.F.R. 60.115a(a) & (c), & 60.113a(a)(1)(i)(D), Subpart Ka]

a. 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 38.4a(ii) if the estimated true vapor pressure is greater than 6.9 kPa (1.0 psia).

b. For emission unit(s) equipped with external floating roof as described in Condition 38.1a,

(i) Keep records of each gap measurement at the plant for a period of at least 2 years following the date of measurement;

(ii) Each record shall identify the vessel on which the measurement was performed and shall contain the date of the seal gap measurement, the raw data obtained in the measurement process required by 40 C.F.R. 60.113a(a)(1)(ii) and the calculation required by 40 C.F.R. 60.113a(a)(1)(iii).

38.6 **Reporting**. The Permittee shall comply with the following:

[40 C.F.R. 60.113a(a)(1) & (2), Subpart Ka]

a. Provide the following information to the Department on or before the date on which construction of the storage vessel commences:

(i) Emission data, if available, for a similar vapor recovery and return or disposal system used on the same type of storage vessel, which can be used to determine the efficiency of the system. A complete description of the emission measurement method used must be included;

(ii) The manufacturer's design specifications and estimated emission reduction capability of the system; and

(iii) The operation and maintenance plan for the system; and

(iv) Any other information which will be useful to the Department in evaluating the effectiveness of the system in reducing VOC emissions.

b. For emission unit(s) equipped with external floating roof as described in Condition 38.1a,

(i) If either the seal gap calculated in accord with 40 C.F.R. 60.113a(a)(1)(iii) or the measured maximum seal gap exceeds the limitations specified by 40 C.F.R. 60.112a, the Permittee shall furnish a report to the Department within 60 days of the date of measurements. The report shall

(A) identify the vessel and list each reason why the vessel did not meet the specifications of 40 C.F.R. 60.112a

(B) describe the actions necessary to bring the storage vessel into compliance with the specifications of 40 C.F.R. 60.112a

38.7 Provide the Department 30 days prior notice of the gap measurement to afford the Department the opportunity to have an observer present

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

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

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

39.1 For EUs in Groups 15 through 17, storage vessel(s) meeting the design requirements specified in 40 C.F.R. 60.112b(a), the Permittee shall equip each with one of the following:

a. a fixed roof in combination with an internal floating roof, as described in 40 C.F.R. 60.112b(a)(1);

b. an external floating roof, as described in 40 C.F.R. 60.112b(a)(2);

c. a closed vent system and control device, as described in 40 C.F.R. 60.112b(a)(3); or

d. a system equivalent to those described in Conditions 39.1a, 39.1b, or 39.1c as provided in 40 C.F.R. 60.114b.

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

39.2 For EUs in Groups 15 through 17, storage vessel(s) meeting the design requirements specified in 40 C.F.R. 60.112b(b), the Permittee shall equip each with one of the following:

a. a closed vent system and control device as specified in 40 C.F.R. 60.112b(a)(3); or

b. a system equivalent to that described in Condition 39.2a as provided in 40 C.F.R. 60.114b.

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

39.3 EUs in Groups15 through 17, storage vessel(s) equipped with a closed vent system and control device meeting the specifications of Conditions 39.1 and 39.2 is exempt from the requirements of Conditions 39.5b and 39.6a.

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

39.4 **Monitoring**. The Permittee shall comply with the following:

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

(i) 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.

(ii) For crude oil or refined petroleum products:

(A) 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.

(B) Determine from available data the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method.

b. Depending on the type of control device chosen in Condition 39.1, monitoring compliance with the corresponding standard shall be determined accordingly as provided in 40 C.F.R. 60.113b.

[40 C.F.R. 60.116b(e) & 60.113b(a) – (c), Subpart Kb]

39.5 **Recordkeeping**. The Permittee shall comply with the following:

a. For the life of the storage vessel(s), EU ID(s) < >, the Permittee shall keep readily accessible records showing the dimensions and an analysis showing the capacity of the storage vessel.

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

(i) 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 each storage vessel described in 40 C.F.R. 60.116b(c).

(ii) Record the true vapor pressure if the estimated maximum true vapor pressure in Condition 39.4a(ii)(B) is greater than 3.5 kPa.

(iii) For EUs in Groups 15 through 17 equipped with fixed roof and internal floating roof as described in Condition 39.1a, the Permittee shall keep a record of each inspection performed as required by 40 C.F.R. 60.113b(a)(1) – (a)(3). Each record shall

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

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

(iv) For EUs in Groups 15 through 17 equipped with external floating roof as described in Condition 39.1b, the Permittee shall keep a record of each gap measurement performed as required by 40 C.F.R. 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

(A) the date of measurement;

(B) the raw data obtained in the measurement; and

(C) the calculations described in 40 C.F.R. 60.113b(b)(2) and (b)(3).

(v) For EUs in Groups 15 through 17 equipped with closed vent system and control device other than a flare as described in Conditions 39.1c and 39.2a, the Permittee shall keep the following records:

(A) a copy of the operating plan.

(B) the measured values of the parameters monitored in accordance with 40 C.F.R. 60.113b(c)(2).

(vi) For EUs in Groups 15 through 17 equipped with closed vent system and flare to comply with 40 C.F.R. 60.112b, records shall be kept of all periods of operation during which the flare pilot flame is absent.

[40 C.F.R. 60.113b, 60.115b(a) – (d), 60.116b(a) – (c) & (e)(2)(ii), Subpart Kb]

39.6 **Reporting**. The Permittee shall comply with the following:

a. The Permittee shall notify the Department within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range of storage tanks specified in 40 C.F.R. 60.116b(d).

b. For EUs in Groups 15 through 17 equipped with fixed roof and internal floating roof as described in Condition 39.1a, the Permittee shall:

(i) Submit to the Department a report that describes the control equipment and certifies that the control equipment meets the specifications of 40 C.F.R. 60.112b(a)(1) and 60.113b(a)(1); or 60.112b(a)(2) and 60.113b(b)(2) – (b)(4)

(ii) Attach the report in Condition 39.6b(i) to the notification required by Condition 34.2;

(iii) Submit a report to the Department within 30 days of the inspection if any of the conditions described in 40 C.F.R. 60.113b(a)(2) are detected during the required annual visual inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.; and

(iv) Submit a report to the Department within 30 days of the inspection after each inspection required by 40 C.F.R. 60.113b(a)(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 40 C.F.R. 60.113b(a)(3)(ii). The report shall identify the storage vessel and the reason it did not meet the specifications of 40 C.F.R. 60.112b(a)(1) or 60.113b(a)(3) and list each repair made.

c. For EUs in Groups 15 through 17 equipped with external floating roof as described in Condition 39.1b, the Permittee shall submit to the Department a report within

(i) 60 days of performing the seal gap measurements required by 40 C.F.R. 60.113b(b)(1) containing the information required in Condition 39.5b(iv); and

(ii) 30 days of the inspection that detects seal gaps measurements exceeding the limitations specified by 40 C.F.R. 60.113b(b)(4). The report will identify the vessel and contain the information specified Condition 39.5b(iv) and the date the vessel was emptied or the repairs made and date of repair.

d. For EUs in Groups 15 through 17 equipped with closed vent system and flare to comply with 40 C.F.R. 60.112b, the Permittee shall submit to the Department

(i) as required by Condition 61, a report within 6 months of the initial start-up date containing the measurements required by 40 C.F.R. 60.18(f) (1) – (f)(6); and

(ii) semiannual reports of all periods recorded under Condition 39.5b(vi).

e. Depending on the type of control device chosen in Condition 39.1, reporting requirements shall be determined accordingly as provided in 40 C.F.R. 60.113b.

[40 C.F.R. 60.113b, 60.115b(a), (b) & (d), & 60.116b(d), Subpart Kb]

Bulk Gasoline Terminals Subject to NSPS Subpart XX and Necessary Requirements for the Refinery to Remain a Minor Source for HAPs

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]
[18 AAC 50.040(a)(2)(AA), 40 C.F.R. 60.502, 503, 505][16]
[Air Quality Control Operating Permit No. AQ0071TVP02, Rev, 4, Conditions 51-54]

40. The Permittee shall comply with the requirements under Conditions 40.1 through 40.9 for EU Groups 10-11 when controlling truck rack gasoline loading and the loading racks which deliver liquid product into gasoline tank trucks.

40.1 The loading racks shall be equipped with a vapor collection system designed to collect the total organic compounds vapors displaced from tank trucks during product loading.

40.2 The emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 10 milligrams (mg) of total organic compounds per liter of gasoline loaded.

40.3 Each vapor collection system shall be designed to prevent any total organic compounds vapors collected at one loading rack from passing to another loading rack.

40.4 Loadings of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline tank trucks using the following procedures:

a. The owner or operator shall obtain the vapor tightness documentation described in 40 CFR 60.505(b) for each gasoline tank truck which is to be loaded at the affected facility.

b. The owner or operator shall require the tank identification number to be recorded as each gasoline tank truck is loaded at the affected facility.

c. The owner or operator shall comply with the following:

(i) The owner or operator shall cross-check each tank identification number obtained in Condition 40.4b with the file of tank vapor tightness documentation within two weeks after the corresponding tank is loaded, unless either of the following conditions is maintained:

(A) If less than an average of one gasoline tank truck per month over the last 26 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed each quarter; or

(B) If less than an average of one gasoline tank truck per month over the last 52 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed semiannually.

[16] 40 C.F.R. 60, Subpart XX applies only to truck loading.

(ii) If either the quarterly or semiannual cross-check provided in Conditions 40.4c(i)(A) through 40.4c(i)(B) of this section reveals that these conditions were not maintained, the source must return to biweekly monitoring until such time as these conditions are again met.

d. The terminal owner or operator shall notify the owner or operator of each non-vapor-tight gasoline tank truck loaded at the affected facility within one week of the documentation cross-check in Condition 40.4c of this section.

e. The terminal owner or operator shall take steps assuring that the non-vapor-tight gasoline tank truck will not be reloaded at the affected facility until vapor tightness documentation for that tank is obtained.

f. Alternate procedures to those described in Conditions 40.4a through 40.4e of this section for limiting gasoline tank truck loadings may be used upon application to, and approval by, the EPA.

40.5 The owner or operator shall act to assure that loadings of gasoline tank trucks at the affected facility are made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system.

40.6 The owner or operator shall act to assure that the terminal's and the tank truck's vapor collection systems are connected during each loading of a gasoline tank truck at the affected facility. Examples of actions to accomplish this include training drivers in the hookup procedures and posting visible reminder signs at the affected loading racks.

40.7 The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the delivery tank from exceeding 4,500 pascals (Pa), or 450 millimeter (mm), of water during product loading. This level is not to be exceeded when measured by the procedures specified in 40 C.F.R. 60.503(d).

40.8 No pressure-vacuum vent in the bulk gasoline terminal's vapor collection system shall begin to open at a system pressure less than 4,500 Pa, or 450 mm, of water.

40.9 Each calendar month, the vapor collection system, the vapor processing system and each loading rack handling gasoline shall be inspected during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. For purposes of this paragraph, detection methods incorporating sight, sound or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected.

41. The Permittee shall not cause or allow emissions from the EU ID 11, VRU #2, to exceed 10 mg of VOC per liter of gasoline loaded.

42. The Permittee shall conduct periodic testing to demonstrate compliance with the emission limits in Conditions 40.2 and 41 as follows:

42.1 Conduct annual source tests that conform to 40 C.F.R. 60.503(c)(1) through (7) on EUs 10 and 11, VRU#1 and VRU#2.

a. Conduct the source test while loading gasoline. Monitor and record the amount of gasoline loaded during the test.

b. Retest under this condition no less than once in each 12 months, and at the request of the Department. Also, if there is evidence of carbon adsorption bed failure, retest under this condition or replace the carbon bed.

c. Immediately before a source test under this condition, use Method 21 to test leakage of all potential sources in the vapor collection system while loading. Repair all leaks with readings of 10,000 ppm (as methane) or greater before doing the source test.

d. Source tests must be consistent with Section 7 under this permit.

e. During the duration of each source test required under this condition:

(i) Monitor and record the total hydrocarbon concentration measured by the hydrocarbon (HC) process monitor in ppmv converted to its equivalent in percent propane.

(ii) Include in the source test report minute-to-minute HC Process Monitor concentration values in ppmv and in percent propane.

42.2 The tank truck vapor tightness documentation required under Condition 40.4a shall be kept on file at the terminal in a permanent form available for inspection.

42.3 The documentation file for each gasoline tank truck shall be updated at least once per year to reflect current test results as determined by Method 27. This documentation shall include, as a minimum, the following information:

a. Test title: Gasoline Delivery Tank Pressure Test—EPA Reference Method 27.

b. Tank owner and address.

c. Tank identification number.

d. Testing location.

e. Date of test.

f. Tester name and signature.

g. Witnessing inspector, if any: Name, signature, and affiliation.

h. Test results: Actual pressure change in 5 minutes, mm of water (average for 2 runs).

42.4 A record of each monthly leak inspection required under Condition 40.9 shall be kept on file at the terminal for at least five years. Inspection records shall include, as a minimum, the following information:

a. Date of inspection.

b. Findings (may indicate no leaks discovered; or location, nature and severity of each leak).

c. Leak determination method.

d. Corrective action (date each leak repaired; reasons for any repair interval in excess of 15 days).

e. Inspector name and signature.

42.5 The terminal owner or operator shall keep documentation of all notifications required under Condition 40.4d on file at the terminal for at least five years.

42.6 As an alternative to keeping records at the terminal of each gasoline cargo tank test result as required in Conditions 42.2, 42.4 and 42.5, an owner or operator may comply with the requirements in either Conditions 42.6a or 42.6b below.

a. An electronic copy of each record is instantly available at the terminal.

(i) The copy of each record in Condition 42.6a is an exact duplicate image of the original paper record with certifying signatures.

(ii) The permitting authority is notified in writing that each terminal using this alternative is in compliance with Condition 42.6a.

b. For facilities that utilize a terminal automation system to prevent gasoline cargo tanks that do not have valid cargo tank vapor tightness documentation from loading (e.g., via a card lock-out system), a copy of the documentation is made available (e.g., via facsimile) for inspection by permitting authority representatives during the course of a site visit, or within a mutually agreeable time frame.

(i) The copy of each record in Condition 42.6b of this section is an exact duplicate image of the original paper record with certifying signatures.

(ii) The permitting authority is notified in writing that each terminal using this alternative is in compliance with Condition 42.6b of this section.

42.7 The owner or operator of an affected facility shall keep records of all replacements or additions of components performed on an existing vapor processing system for at least five years.

43. The Permittee shall Report under Condition 121, non-compliance with any of the requirements listed under Conditions 40 through 42.

Compliance Assurance Monitoring (CAM) Plan for the HC Process Monitor

44. The Permittee shall fulfill the CAM requirements for EU Group IDs 10 & 11 as follows:

[40 C.F.R. 64.6(c)]

44.1 Comply with the monitoring procedures in the *FHR Compliance Assurance Monitoring Plan for Truck Loading and Rail Loading Vapor Recovery Units (CAM Plan)*, (Appendix B, Section 14).

44.2 If the Permittee elects to use an alternative monitoring procedure for demonstrating compliance with the requirements of 40 C.F.R. 64, or change the existing CAM Plan, the Permittee must submit a revised CAM plan to the Department for approval.

44.3 If a monitored total hydrocarbon concentration for either EU Group IDs 10 or 11 show a one-hour average concentration between 0.37% and 1.06% as propane, then an investigation will be initiated by the Permittee.

a. The results of the investigation will determine whether the Vapor Recovery Unit exceeded the 10 mg VOC per-liter of gasoline loaded limit.

b. The investigation will include the methodology provided by John Zink (see Appendices B and C, Section 14) and any other credible evidence brought forth during the investigation. The calculation of the maximum allowable vent total hydrocarbon concentration using the methodology provided by John Zink shall be performed using values that are representative of the actual operating conditions at the time of the exceedance.

c. Unless the results indicate an exceedance of the 10 mg VOC limit, investigation results must be submitted to the Agency within 30 days of the end of the month in which the one-hour average hydrocarbon concentration was between 0.37% and 1.06% as propane.

44.4 Submit a report in accordance with Condition 121 if a monitored total hydrocarbon concentration for either EU Group IDs 10 or 11 show a one-hour average concentration greater than 1.07% as propane or the results of the investigation under Condition 44.3 indicate that the VRU exceeded 10 mg VOC per-liter of gasoline loaded.

44.5 Investigate the cause if a monitored total hydrocarbon concentration for either EU Group IDs 10 or 11 show a one-hour average concentration greater than 1.07% as propane or if the results of the investigation under Condition 44.3 indicate that the VRU emissions exceeded the 10 mg VOC per-liter of gasoline loaded standard. Include in each stationary source operating report under Condition 122, for the period covered by the report:

a) a summary of the time periods when the monitored one-hour average concentrations were greater than 1.07% as propane;

b) a summary of the time periods and investigation results triggered under Condition 44.3;

c) a summary of the results of the investigation, including any corrective actions taken;

d) records of the calculations performed under Conditions 44.3 and 44.4 and documented basis for any assumptions made.

44.6 Verify the accuracy of the VRU CAM device by introducing a known concentration of propane calibration gas to the analyzer once each calendar year, in conjunction with the scheduled source testing required by Condition 42.1.

45. Asbestos NESHAP. The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[40 C.F.R. 61, Subparts A & M, and Appendix A]

46. Protection of Stratospheric Ozone, 40 C.F.R. 82

Subpart F – Recycling and Emissions Reduction

46.1 **Refrigerant Recycling and Disposal.** The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.

[18 AAC 50.040(d) & 18 AAC 50.326(j)]
[40 C.F.R. 82, Subpart F]

Subpart G – Significant New Alternatives Policy

46.2 The Permittee shall comply with the applicable prohibitions set out in 40 C.F.R. 82.174 (Protection of Stratospheric Ozone Subpart G – Significant New Alternatives Policy Program).

[18 AAC 50.040(d)]
[40 C.F.R. 82.174 (b) - (d)]

Subpart H – Halon Emissions Reduction

46.3 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)]
[40 C.F.R. 82.270 (b)-(f)]

NESHAPs Applicability Determinations

47. The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 C.F.R. 63) in accordance with the procedures described in 40 C.F.R. 63.1(b) and 63.10(b)(3). If a source becomes affected by an applicable subpart of 40 C.F.R. 63, Permittee shall comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 C.F.R. 63.6(c).

[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), 63.6(c)(1), & 63.10(b)(3)]

47.1 After the effective date of any relevant standard promulgated by the Administrator under this part, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator and the Department of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in §63.9(b).

[18 AAC 50.040(c)(1)(A) & (E) & 50.040(j), 7/25/08; 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii)]
[40 C.F.R. 63.1(b), & 63.6(c)(1), & 63.10(b)(3)]

48. NSPS and NESHAP Reports. The Permittee shall:

48.1 **Reports:** Attach to the operating report required by Condition 122, 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; and

48.2 **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), and 18 AAC 50.040(j)]
[40 C.F.R. 71.6(c)(6)]

NESHAP under 40 C.F.R. 63, Subpart ZZZZ

49. Emergency Reciprocating Internal Combustion Engines. The Permittee shall operate emergency stationary RICE EU Group 29 in accordance with the following:

[18 AAC 50.040(c)(23)]
[40 CFR 63.6675, Subpart ZZZZ]

49.1 The Permittee has no time limit on the use of emergency stationary RICE EU Group 29 in emergency situations.

[40 CFR 63.6640(f)(1), Subpart ZZZZ]

49.2 The Permittee may operate emergency stationary RICE EU Group 29 for any combination of the purposes specified in Conditions 49.2a through 49.2b for a maximum of 100 hours per calendar year, each. Any operation for non-emergency situations as allowed by Condition 49.3 counts as part of the 100 hours per calendar year, each, allowed by this condition.

[40 CFR 63.6640(f)(2), Subpart ZZZZ]

a. The Permittee may operate emergency stationary RICE EUs 1 and 2 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 EUs. 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 owner or operator maintains records indicating that Federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

b. The Permittee may operate emergency stationary RICE EU Group 29 for periods where there is a deviation of voltage or frequency of five-percent or greater below standard voltage or frequency.

[40 CFR 63.6640(f)(2)(i) and (iii), Subpart ZZZZ]

49.3 The Permittee may operate emergency stationary RICE EU Group 29 for up to 50 hours per calendar year, each, in non-emergency situations in accordance with the following.

a. The 50 hours of operation in non-emergency situations shall be counted as part of the 100 hours per calendar year, each, for maintenance and testing and emergency demand response provided in Condition 49.2; and

b. The 50 hours of operation in 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 CFR 63.6640(f)(3), Subpart ZZZZ]

49.4 The Permittee shall minimize the time emergency stationary RICE EU Group 29 spend at idle and minimize their respective startup times at startup to a period needed for appropriate and safe loading of the EUs, not to exceed 30 minutes each, after which time the non-startup emission limitations apply. The Permittee shall also

a. change the oil and filter in each EU every 500 hours of its operation, or annually, whichever comes first;

b. inspect the air cleaner in each EU every 1,000 hours of it operation, or annually, whichever comes first, and replace as necessary; and

c. inspect all hoses and belts in each EU every 500 hours of its operation, or annually, whichever comes first, and replace as necessary.

[40 CFR 63.6640(a), Subpart ZZZZ, 6/14/2014]
[Table 2c, Item 1, Subpart ZZZZ, 6/14/2014]

49.5 The Permittee shall demonstrate continuous compliance with the emissions and operating limitations, and work or management practices for emergency stationary RICE EU Group 29 by

a. operating and maintaining each EU according to the manufacturer's emission-related operation and maintenance instructions; or

b. developing and following a maintenance plan which must provide to the extent practicable for the maintenance and operation of each EU in a manner consistent with good air pollution control practice for minimizing emissions.

[40 CFR 63.6640(a), Subpart ZZZZ, 6/14/2014]
[Table 6, Item 9, Subpart ZZZZ, 6/14/2014]

49.6 The Permittee shall submit, for emergency stationary RICE EU Group 29, an initial notification not later than 120 calendar days after the effective date of the relevant standard, or within 120 calendar days after the source becomes subject to the relevant standard, which includes

a. a statement that the EUs have no additional requirements and an explanation of the basis for the exclusion, e.g. that they operate exclusively as emergency stationary RICE with a site rating of more than 500 bhp located at a major source of HAP emissions;

[40 C.F.R. 63.6645(f), 1/30/2013]

b. the name and address of the owner or operator;

c. the physical location or address of the affected source;

d. an identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;

e. a brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted; and

f. a statement of whether the affected source is a major source or an area source.

[40 C.F.R. 63.9(b)(2)(i-v), 5/30/2003]

49.7 The Permittee, for emergency stationary RICE EU Group 29, shall keep records of the maintenance conducted on these EUs to demonstrate that they were operated and maintained according to the maintenance plan specified in Condition 49.5.

[40 C.F.R 60.6655(e) & (e)(2), 1/30/2013]

49.1 The Permittee, for emergency stationary RICE EU Group 29, shall submit an annual report as follows:

[40 C.F.R 60.6655(e) & (e)(2), 1/30/2013]

a. The report must contain the following information

(i) Company name and address where the engine is located;

(ii) Date of the report and beginning and ending dates of the reporting period;

(iii) Engine site rating and model year;

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place; and

(v) Hours operated for the purposes specified in Condition 49.2b, including the date, start time, and end time for engine operation for the purposes specified in this Condition.

[40 C.F.R. 63.6650(h)(1)(i-v), 1/30/2013]

b. The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year

[40 C.F.R. 63.6650(h)(2), 1/30/2013]

c. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 C.F.R. 63.13.

[40 C.F.R. 63.6650(h)(3), 1/30/2013]

Gasoline Distribution Bulk Terminal – 40 CFR 63 Subpart BBBBBB

50. Gasoline storage tanks, gasoline loading racks, vapor collection-equipped gasoline cargo tanks, and equipment components in vapor or liquid gasoline service under the definitions set in 40 C.F.R. 63.11100 in EU Groups 10 through 12, 17, and 18 through 24 shall comply with the following:

50.1 **Storage Tanks Management Practices.** Equip gasoline storage tanks with an internal floating roof according to requirements of 40 C.F.R. 60.112(a)(1) except for the secondary seal requirements under 40 C.F.R. 60.112(a)(1)(ii)(B) and 40 C.F.R. 60.112(a)(1)(iv) through (ix). Equip each external floating roof gasoline storage tank according to the requirements in 40 C.F.R. 60.112b (a)(2) of this chapter, except that the requirements of 40 C.F.R. 60.112b (a)(2)(ii) of this chapter shall only be required if such storage tank does not currently meet the requirements of 40 C.F.R. 60.112b (a)(2)(i).

[40 C.F.R. 63.11087(a)]

50.2 **Gasoline Loading Rack Emission Limitations and Management Practices.** EU Groups 10 and 11 with a total throughput less than 250,000 gallons-per-day must follow filling procedure with submerged filling pipe that is no more than 6 in. from the bottom of the cargo tank. Records that document loading rack gasoline throughput must be made available within 24-hours of a request by the administrator.

[40 C.F.R. 63.11088(a)]

50.3 **Gasoline Equipment Leak Management Practices.** Monthly leak inspection must be performed on all equipment in gasoline service with detection methods incorporating sight, sound, and smell. All repairs on leaks and replacement of leaking equipment must be completed within 15 calendar days of detection. If the repair is not feasible within 15 days, the Facility must report the reason and the date of each repair in the semi-annual compliance certification required by Condition 52.1.

[40 C.F.R. 63.11089 (a)-(d)]

51. Testing and Monitoring Requirements

51.1 **Gasoline Delivery Tanks.** The Facility shall verify that all gasoline delivery tanks that come in the facility have undergone an annual certification test, using the test method specified under Method 27, Appendix A-8 of 40 C.F.R. 60. Alternatively, rail car bubble leak test procedure or leakage pressure test procedure can be conducted in compliance with the requirements in 49 C.F.R. 179.7, 49 C.F.R. 180.509, 49 C.F.R. 180.505 and 49 C.F.R. 180.511 for periodic testing of cargo tanks.

[40 C.F.R 63.11092(f)(i)-(iii)]

51.2 **Gasoline Storage Tanks.** For gasoline storage tanks, the Facility must comply with the monitoring requirements in 40 C.F.R. 60.113b(a) applicable to internal floating roof tanks with a capacity greater than 75 cubic meters (m^3) and a gasoline throughput greater than 480 gallons-per-day.

a. 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 volatile organic liquids. Make necessary repairs to holes, tears or opening in the seal or other defect before filling the gasoline storage tank.

b. Inspect gasoline tanks equipped with primary seal and secondary seal (if one in service) at least once every 12 months after the initial fill. The repairs on the components must be conducted or tanks removed from services within 45 days. A 30 day extension must be requested from the administrator by documenting the alternate storage capacity and specifying the schedule of actions.

c. Visually inspect the internal floating roof, the primary seal and the secondary seal (if one in service) each time the gasoline storage tanks is emptied or degassed. Repairs must be conducted on the components as necessary and inspections conducted as specified in 40 C.F.R. 60.113(b)(a).

[40 C.F.R. 63.11092(e)]

52. Reporting Requirements. The Facility shall comply with the following requirements

52.1 **Semi-annual Compliance Report:** Submit a semiannual compliance report to the administrator including the following information

a. For gasoline storage tanks, the Facility must include information pertaining to all the inspections and repairs conducted during initial filling, degassing or emptying and the annual inspections conducted. Information pertaining to excess emission events documented in a report must be included for EU Groups 10 through 12, and 17 that process or store gasoline. For delivery tanks, the certification must include inspections pertaining to the annual certification or bubble test leak procedures conducted.

[40 C.F.R. 63.11095(a) & 40 C.F.R. 63.11095(b)]

b. For loading racks, each loading of a gasoline cargo tank for which vapor tightness documentation had not been previously obtained by the facility.

[40 C.F.R. 63.11095(a)(2)]

c. For equipment leak inspections, the number of equipment leaks not repaired within 15 days after detection and the reasons must be included.

[40 C.F.R. 63.11095(a)(3)]

d. For malfunctions that caused emission limitation to be exceeded, include number, duration and a brief description of each type of malfunction. The report should also include actions taken to minimize emissions in accordance with 40 C.F.R. 63 11085(a) and action taken to correct malfunction. A report is not required if a malfunction did not occur during the reporting period.

[40 C.F.R. 63.11095(d)]

52.2 **Excess Emissions Report.** Submit an excess emissions report with the semiannual compliance certification including information of excess emissions events. The following information must be included in the excess emissions report:

a. Information on non-vapor-tight gasoline cargo tank loading at the facility must be included with details on filling procedures for EU Groups 10 and 11 and the certification and leak procedures for delivery tanks.

b. Each occurrence of an equipment leak for which no repair attempt was made within 15 days or for which repair was not completed within 15 days after detection as described in 40 C.F.R. 63 11095(a)(3).

[40 C.F.R. 63.11095(b)]

53. Recordkeeping Requirements

53.1 **Gasoline Loading Racks.** EU Groups 10 and 11, record a total gasoline throughput of less than 250,000 gallons-per-day, calculated by summing the current day's throughput, plus the throughput for the previous 364 days, and then dividing that sum by 365. Records of gasoline throughput must be kept and made available within 24 hours of a request by the administrator to document the information.

[40 C.F.R. 63 Subpart BBBBBB Table 2, Option 2(b)]

53.2 **Gasoline Storage Tanks**

a. All records must be kept onsite for five years for gasoline storage tanks.

[40 C.F.R. 63.11094(a)]

b. Prepare and submit a semiannual compliance report that describes the control equipment and certifies that the control equipment meets the specifications of 40 C.F.R. 60.112(a)(1) and 40 C.F.R. 60.113(b)(a)(1).

[40 C.F.R. 63.11095(a)(1)]

c. Keep records of all inspections conducted. The record must identify the storage tanks on which inspection was conducted, date of the inspection and condition of the component of the control equipment.

[40 C.F.R. 63.11094(a)]

d. The Facility shall notify the department and EPA in writing at least 30 days prior to the filling or refilling of gasoline storage tanks, with volatile liquids.

[40 C.F.R. 63.11092(e)(1)]

53.3 **Gasoline Cargo Tanks.** The Facility must comply with the following requirements:

a. Maintain instantly available electronic copy of the tank test results to meet the certification requirements for delivery tanks that are loaded at the terminal.

[40 C.F.R. 63.11094(c)(1)]

b. Use a terminal automation system to prevent gasoline delivery tanks that do not have valid vapor tightness documentation from loading provided a copy of the documentation is made available to the Administrator’s delegated representatives for inspection during the course of site visit or within a mutually agreeable time frame.

[40 C.F.R. 63.11094(c)(2)]

c. Notify the administrator in writing that the facility is using the electronic version of the gasoline delivery tank test results.

[40 C.F.R. 63.11094(c)(2)]

53.4 **Equipment in Gasoline Service.** The Facility shall follow the following recordkeeping requirements:

a. Prepare and maintain a record describing the types, identification numbers and locations of all equipment in gasoline service.

[40 C.F.R. 63.11094(d)]

b. Maintain a logbook to record each leak that is detected with information regarding, equipment type and identification number, nature of the leak and method of detection, date of detection of the leak and date of each attempt to repair the leak, repair methods applied, for repairs delayed- reason if the leak was not repaired within 15 calendar days, the expected date of successful repair of the leak and date of successful repair of the leak.

[40 C.F.R. 63.11094(e)]

Gasoline Dispensing Operations - 40 C.F.R. 63 Subpart CCCCCC

54. For gasoline storage tanks and associated equipment components that meet the definition of an affected source under 40 C.F.R. 63.11112, gasoline storage tanks, T-05833 and T-05834, the Facility shall comply with the following requirements:

54.1 Record monthly throughput and provide to the Administrator upon request.

[40 C.F.R. 63.11111(e)]

54.2 Operate and maintain any affected source in a manner consistent with safety and good air pollution control practices including:

a. Minimizing and cleaning up gasoline spills;

b. Covering all open gasoline containers and storage tank fill pipes with a gasketed seal, when not in use; and

c. Minimizing gasoline sent to open waste collection systems that collet and transport gasoline to reclamation and recycling devices, such as oil/water separators.

[40 C.F.R. 63.11116]

54.3 Maintain records of any malfunction in operation an affected source, the duration of the event, any actions taken to minimize emissions during the event, and any corrective actions taken to restore normal operation.

[40 C.F.R. 63.11125(d)]

54.4 Report by March 15th of each year the number, duration, a brief description, and actions taken to minimize emissions during each malfunction which occurred in the previous year.

[40 C.F.R. 63.11126]

Industrial Boilers - 40 C.F.R. 63 Subpart JJJJJJ

55. NESHAP Subpart JJJJJJ Applicability and General Requirements. For EU Groups 9 through 13 and 24, the Permittee shall comply with the applicable requirements for existing oil fired boilers located at an area source of HAP emissions.

[18 AAC 50.040(c)(39), 50.040(j) & 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 63.11193, 63.11194(a) though (e), 63.11200(e) & (f), & 63.11237]

55.1 The Permittee shall comply with the requirements in Condition 55.1a:

a. For an existing affected boiler, the Permittee must comply with the applicable provisions in NESHAP Subpart JJJJJJ as specified in Conditions 55.1a(i) through 55.1a(iii).

(i) For EUs subject to a work practice or management practice standard of a tune-up, you must comply with the work practice or management practice standard.

[40 C.F.R. 63.11196(a)(1)]

(ii) For EUs subject to emission limits, you must comply with the emission limits.

[40 C.F.R. 63.11196(a)(2)]

(iii) For EUs subject to energy assessment requirement, you must comply with the energy assessment requirement.

[40 C.F.R. 63.11196(a)(3)]

56. NESHAP Subpart JJJJJJ Standards. For EU Groups 9 through 13 and 24:

56.1 For EUs rated at 10 MMBtu/hr or greater, you must comply with each emission limit specified in Table 1 to 40 C.F.R. 63, Subpart JJJJJJ that applies to your boiler.

[40 C.F.R. 63.11201(a), Table 1 to 40 C.F.R. 63, Subpart JJJJJJ]

a. For EUs with emission limits, you must comply with each operating limit in Table 3 to 40 C.F.R. 63, Subpart JJJJJJ that applies to your boiler, except during periods of startup and shutdown.

[40 C.F.R. 63.11201(c)]

56.2 You must comply with each work practice standard, emission reduction measure, and management practice specified in Table 2 to 40 C.F.R. 63, Subpart JJJJJJ that applies to your boiler. An energy assessment completed on or after January 1, 2008 that meets or is amended to meet the energy assessment requirements in Table 2 to 40 C.F.R. 63, Subpart JJJJJJ satisfies the energy assessment requirement. A facility that operates under an energy management program established through energy management systems compatible with ISO 50001, that includes the affected units, also satisfies the energy assessment requirement.

[40 C.F.R. 63.11201(b)]

a. For new oil-fired boilers rated at 10 MMBtu/hr or greater, minimize the boiler's startup and shutdown periods and conduct startups and shutdowns according to the manufacturer's recommended procedures. If manufacturer's recommended procedures are not available, you must follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available.

b. For existing oil-fired boilers with heat input capacity greater than 5 MMBtu/hr, or use an oxygen trim system that maintains an optimum air-to-fuel ratio, conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler biennially as specified in §63.11223.

c. For new oil-fired boilers with heat input capacity greater than 5 MMBtu/hr, or use an oxygen trim system that maintains an optimum air-to-fuel ratio, conduct a tune-up of the boiler biennially as specified in §63.11223.

d. For existing oil-fired boilers with heat input capacity of equal to or less than 5 MMBtu/hr, conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler every five years as specified in §63.11223.

e. For new oil-fired boilers with heat input capacity of equal to or less than 5 MMBtu/hr, conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler every five years as specified in §63.11223.

[40 C.F.R. 63.11201(c)]

56.3 The standards in Conditions 56.1 and 56.2 apply at all times the affected boiler is operating, except during periods of startup and shutdown as defined in §63.11237, during which time you must comply only with Table 2 to 40 C.F.R. 63, Subpart JJJJJJ.

[40 C.F.R. 63.11201(d)]

56.4 At all times you 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 any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 C.F.R. 63.11205(a)]

57. NESHAP Subpart JJJJJJ Continuous Compliance Requirements. For EU Groups 9 through 13 and 24, the Permittee shall demonstrate continuous compliance with the work practice and management practice standards in Conditions 56.1 through 56.4 as follows:

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

57.1 You must demonstrate initial compliance with each emission limit specified in Table 1 to this subpart that applies to you by either conducting performance (stack) tests, as applicable, according to §63.11212 and Table 4 to 40 C.F.R. 63, Subpart JJJJJJ or, for mercury, conducting fuel analyses, as applicable, according to §63.11213 and Table 5 to 40 C.F.R. 63, Subpart JJJJJJ.

[40 C.F.R. 63.11210(a)]

57.2 For existing affected boilers that have applicable emission limits, you must demonstrate initial compliance with the applicable emission limits and according to the applicable provisions in §63.7(a)(2), except as provided in Condition 57.6.

[40 C.F.R. 63.11210(b)]

57.3 For existing affected boilers that have applicable work practice standards, management practices, or emission reduction measures, you must demonstrate initial compliance according to the applicable provisions in §63.7(a)(2), except as provided in Condition 57.3.

[40 C.F.R. 63.11210(c)]

57.4 For new or reconstructed affected boilers that have applicable emission limits, you must demonstrate initial compliance with the applicable emission limits within 180 days after startup of the source, according to §63.7(a)(2)(ix).

[40 C.F.R. 63.11210(d)]

57.5 For affected boilers that switch fuels or make a physical change to the boiler that results in the applicability of a different subcategory within Subpart JJJJJJ or the boiler becoming subject to Subpart JJJJJJ, demonstrate compliance within 180 days of the effective date of the fuel switch or the physical change. Notification of such changes must be submitted according to §63.11225(g).

[40 C.F.R. 63.11210(h)]

57.6 For boilers located at existing major sources of HAP that limit their potential to emit (e.g., make a physical change or take a permit limit) such that the existing major source becomes an area source, you must comply with the applicable provisions as specified Conditions 57.6a through 57.6c.

[40 C.F.R. 63.11210(i)]

a. Any such existing boiler at the existing source must demonstrate compliance with 40 C.F.R. 63, Subpart JJJJJJ upon the existing major source commencing operation as an area source

[40 C.F.R. 63.11210(i)(1)]

b. Any new or reconstructed boiler at the existing source must demonstrate compliance with subpart JJJJJJ upon startup.

[40 C.F.R. 63.11210(i)(2)]

c. Notification of such changes must be submitted according to §63.11225(g).

[40 C.F.R. 63.11210(i)(3)]

57.7 For existing affected boilers that have not operated since the effective date of the rule,

a. You must complete the initial compliance demonstration, if subject to the emission limits in Table 1 to 40 C.F.R. 63, Subpart JJJJJJ, as specified in paragraphs (a) and (b) of this section, no later than 180 days after the re-start of the affected boiler and according to the applicable provisions in §63.7(a)(2).

[40 C.F.R. 63.11210(j)(1)]

b. complete the initial performance tune-up, if subject to the tune-up requirements in §63.11223, by following the procedures described in §63.11223(b) no later than 30 days after the re-start of the affected boiler.

[40 C.F.R. 63.11210(j)(2)]

c. You must complete the one-time energy assessment, if subject to the energy assessment requirements specified in Table 2 to this subpart, no later than the compliance date specified in §63.11196

[40 C.F.R. 63.11210(j)(3)]

57.8 Conduct a performance tune-up according to 40 C.F.R. 63.11223(b) for each of EU rated at 5 MMBtu/hr or less every five years and conduct a performance tune-up for each of EU rated more than 5 MMBtu/hr biennially. Submit a signed statement in the Notification of Compliance Status report that indicates that you conducted a tune-up of the boiler.

[40 C.F.R. 63.11214(b)]

57.9 For an existing affected boiler with a heat input capacity of 10 million Btu per hour or greater, you must submit a signed certification in the Notification of Compliance Status report that an energy assessment of the boiler and its energy use systems was completed according to Table 2 to 40 C.F.R. 63, Subpart JJJJJJ and is an accurate depiction of your facility.

[40 C.F.R. 63.11214(c)]

57.10 For a boiler subject to emission limits in Table 1 to 40 C.F.R. 63, Subpart JJJJJJ, you must minimize the boiler's startup and shutdown periods following the manufacturer's recommended procedures, if available. If manufacturer's recommended procedures are not available, you must follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available. You must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available.

[40 C.F.R. 63.11214(d), 63.11223(g)]

57.11 For boilers rated at heat input capacity of 10 million British thermal units per hour or greater, you must conduct all applicable performance (stack) tests according to §63.11212 on a triennial basis, except as specified in 40 C.F.R. 63.11220(b) –(d). Triennial performance tests must be completed no more than 37 months after the previous performance test.

[40 C.F.R. 63.11220(a)]

57.12 You must demonstrate continuous compliance with each emission limit and operating limit in Tables 1 and 3 to 40 C.F.R. 63, Subpart JJJJJJ that applies to you according to the methods specified in Table 7 to 40 C.F.R. 63, Subpart JJJJJJ and to 40 C.F.R. 63.11222(a)(1)-(4).

[40 C.F.R. 63.11222(a)]

57.13 For boilers subject to the work practice standard or the management practices of a tune-up, you must conduct a performance tune-up according to Condition 57.14 and keep records as required in Condition 59 to demonstrate continuous compliance. You must conduct the tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.

[40 C.F.R. 63.11223(a)]

57.14 For boilers rated at more than 5 MMBtu/hr, you must conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in Conditions 57.14a through 57.14g. Each biennial tune-up must be conducted no more than 25 months after the previous tune-up. For a new or reconstructed boiler, the first biennial tune-up must be no later than 25 months after the initial startup of the new or reconstructed boiler.

[40 C.F.R. 63.11223(b)]

a. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months).

b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.

c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection).

d. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available.

e. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

f. Maintain onsite and submit, if requested by EPA or the Department, a report containing the information in Conditions 57.14f(i) through 57.14f(iii).

(i) 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.

(ii) A description of any corrective actions taken as a part of the tune-up of the boiler.

(iii) The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, 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 use by each unit.

g. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup.

[40 C.F.R. 63.11223 (b)(1) through (7)]

57.15 Boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up, you must conduct a tune-up of the boiler every five years as specified Conditions 57.14a through 57.14g. Each five-year tune-up must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed boiler with an oxygen trim system, the first 5-year tune-up must be no later than 61 months after the initial startup. You may delay the burner inspection specified in 40 C.F.R. 63.11223(b)(1) and inspection of the system controlling the air-to-fuel ratio specified in 40 C.F.R. 63.11223(b)(3) of until the next scheduled unit shutdown, but you must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months.

[40 C.F.R. 63.11223(c)]

57.16 For boilers with heat input capacity less than 5 MMBtu/hr, you must conduct a tune-up every five years as specified in Conditions 57.14a through 57.14g. Each five-year tune-up must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed oil-fired boiler with a heat input capacity of equal to or less than five million Btu per hour, the first five-year tune-up must be no later than 61 months after the initial startup. You may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months.

[40 C.F.R. 63.11223(e)]

58. NESHAP Subpart JJJJJJ Notification Requirements. For EU Groups 9 through 13 and 24, the Permittee must submit to the Department and EPA the following notifications:

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(c)(3)(iii)]
40 C.F.R. 63.11225(a)]

58.1 **Notification of Compliance Status.** You must submit the Notification of Compliance Status upon startup of affected boilers, except as specified in Conditions 58.2 and 58.4.

[40 C.F.R. 63.11225(a)(1)]

58.2 An Initial Notification must be submitted within 120 days after the source becomes subject to the standard.

[40 C.F.R. 63.11225(a)(2)]

58.3 If you are required to conduct a performance stack test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance stack test is scheduled to begin.

[40 C.F.R. 63.11225(a)(3)]

58.4 If you must conduct a performance stack test, you must submit the Notice of Compliance Status within 60 days of completing the performance test. You must submit the Notification of Compliance Status in accordance with Conditions 58.4a and 58.4f. The Notification of Compliance Status must include the information and certification(s) of compliance in Conditions 58.4a through 58.4d as applicable, and signed by a responsible official.

[40 C.F.R. 63.11225(a)(4), Subpart JJJJJJ]

a. You must submit the information required in 40 C.F.R. 63.9(h)(2), except the information listed in 40 C.F.R. 63.9(h)(2)(i)(B), (D), (E), and (F). If you conduct any performance tests or CMS performance evaluations, you must submit that data as specified in 40 C.F.R. 63.11225(e). If you conduct any opacity or visible emission observations, or other monitoring procedures or methods, you must submit that data to the Administrator at the appropriate address listed in §63.13.

b. "The facility complies with the requirements in 40 C.F.R. 63.11214 to conduct an initial tune-up of the boiler"

c. "This facility has had an energy assessment performed according to 40 C.F.R. 63.11214(c)".

d. For units that install bag leak detection systems: "This facility complies with the requirements in §63.11224(f)."

e. For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit."

f. The notification must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written Notification of Compliance Status must be submitted to the EPA at the appropriate address listed in 40 C.F.R. 63.13.

[40 C.F.R. 63.11225(a)(4)(i) through (vi)]

58.5 If you are using data from a previously conducted emission test to serve as documentation of conformance with the emission standards and operating limits of this subpart, you must include in the Notification of Compliance Status the date of the test and a summary of the results, not a complete test report, relative to this subpart.

[40 C.F.R. 63.11225(a)(5)]

58.6 If the Permittee intends to commence or recommence combustion of solid waste, the Permittee must provide 30 days prior notice of the date upon which the Permittee will commence or recommence combustion of solid waste. The notification must identify the items in 40 C.F.R. 63.11225(f)(1) through (4).

[40 C.F.R. 63.11225(f)]

58.7 If you have switched fuels or made a physical change to the boiler and the fuel switch or change resulted in the applicability of a different subcategory within NESHAP Subpart JJJJJJ or in the boiler switching out of NESHAP Subpart JJJJJJ due to a change to 100-percent natural gas, the Permittee must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the change. The notification must identify:

[40 C.F.R. 63.11225(g)]

a. The name of the owner or operator of the affected source, the location of the source, the boiler(s) that have switched fuels or were physically changed, and the date of the notice.

b. The date upon which the fuel switch or physical change occurred.

[40 C.F.R. 63.11225(g)(1) and (2)]

59. NESHAP Subpart JJJJJJ Recordkeeping Requirements. For EU Groups 9 through 13 and 24, the Permittee shall keep records as follows:

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

59.1 You must maintain the records specified in Conditions 59.1a through 59.1d.

[40 C.F.R. 63.11225(c)(1)]

a. As required in 40 C.F.R. 63.10(b)(2)(xiv), you must keep a copy of each notification and report submitted to comply with NESHAP Subpart JJJJJJ and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.

[40 C.F.R. 63.11225(c)(1)]

b. You must keep records to document conformance with the work practices and management practices, as specified in Conditions 59.1b(i) through 59.1b(ii).

[40 C.F.R. 63.11225(c)(2)]

(i) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.

[40 C.F.R. 63.11225(c)(2)(i)]

(ii) For each boiler required to conduct an energy assessment, you must keep a copy of the energy assessment report.

[40 C.F.R. 63.11225(c)(2)(iii)]

(iii) For each boiler subject to an emission limit in Table 1 40 C.F.R. 63, Subpart JJJJJJ, you must also keep records of monthly fuel use by each boiler, including the type(s) of fuel and amount(s) used.

[40 C.F.R. 63.11225(c)(2)(iv)]

c. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation that were done to demonstrate compliance with the mercury emission limits. Supporting documentation should include results of any fuel analyses. You can use the results from one fuel analysis for multiple boilers provided they are all burning the same fuel type.

[40 C.F.R. 63.11225(c)(3)]

d. Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment.

[40 C.F.R. 63.11225(c)(4)]

e. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in Condition 56.1, including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation.

[40 C.F.R. 63.11225(c)(5)]

f. You must keep the records of all inspection and monitoring data required by §§63.11221 and 63.11222, and the information identified in Conditions 59.1f(i) through 59.1f(vi)) for each required inspection or monitoring.

[40 C.F.R. 63.11225(c)(6)]

(i) The date, place and time of the monitoring event

(ii) Person conducting the monitoring.

(iii) Technique or method used.

(iv) Operating conditions during the activity.

(v) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation.

(vi) Maintenance or corrective action taken (if applicable).

g. If you use a bag leak detection system, you must keep the records specified in Condition 59.1g(i) through 59.1g(iii) of this section.

[40 C.F.R. 63.11225(c)(7)]

(i) Records of the bag leak detection system output.

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings

(iii) The date and time of all bag leak detection system alarms, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.

59.2 Your records must be in a form suitable and readily available for expeditious review. You must keep each record for five years following the date of each recorded action. You must keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least two years after the date of each recorded action. You may keep the records off site for the remaining three years.

[40 C.F.R. 63.11225(d)]

60. NESHAP Subpart JJJJJJ Reporting Requirements. For EU Groups 9 through 13 and 24, the Permittee shall report, as follows:

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

60.1 You must prepare, by March 1 of each year, and submit to the Department upon request, an annual compliance certification report for the previous calendar year containing the information specified in Condition 60.1a through 60.1d. For boilers that are subject only to a requirement to conduct a biennial or five-year tune-up and not subject to emission limits or operating limits, you may prepare only a biennial or five-year compliance report as specified in Conditions 60.1a and 60.1b.

[40 C.F.R. 63.11225(b), Subpart JJJJJJ]

a. Company name and address;

b. Statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of NESHAP Subpart JJJJJJ. Your notification must include the following certification(s) of compliance, as applicable, and be signed by a responsible official:

[40 C.F.R. 63.11225(b)(1) and (2)]

(i) "This facility complies with the requirements in §63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler."

(ii) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit."

(iii) "This facility complies with the requirement in §§63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

[40 C.F.R. 63.11225(b)(2)(i)-(iii)]

c. If the source experiences any deviations from the applicable requirements during the reporting period, include a description of deviations, the time periods during which the deviations occurred, and the corrective actions taken.

[40 C.F.R. 63.11225(b)(3)]

d. The total fuel use by each affected boiler subject to an emission limit, for each calendar month within the reporting period

[40 C.F.R. 63.11225(b)(4)]

60.2 Within 60 days after the date of completing each performance test (defined in §63.2) as required by this subpart you must submit the results of the performance tests, including any associated fuel analyses, required by this subpart to EPA's WebFIRE database by using CEDRI that is accessed through EPA's CDX (www.epa.gov/cdx).

[40 C.F.R. 63.11225I]

—Petroleum Refineries Subject to NSPS Subpart J

61. NSPS Subpart J SO_2 Emission Standards. The Permittee shall not cause or allow liquid fuel burned in EU Groups 1, 4 through 6, 8, and any fuel gas combustion devices operating in service of a petroleum refinery as defined by 40 C.F.R. 60.100 to exceed a SO_2 concentration, averaged over three hours equal to as follows:

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

61.1 for equipment burning only fuel gas[17], the concentration of uncontrolled emission that would result from burning fuel gas containing 230 milligrams H_2S per dscm;

61.2 for equipment that does not burn fuel gas, 500 ppm; or

61.3 for equipment that burns a combination of fuel gas and other fuels, a concentration based on the allowable emissions in Conditions 61.1 and 61.2, prorated by the proportion of fuel gas and other fuels to the total fuel burned in the equipment.

61.4 **Monitoring**. The Permittee shall monitor the SO_2 emission standard in Condition 61 by:

[40 C.F.R. 60.105, Subpart J]

[17] *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, as defined in 40 C.F.R. 60.101(d) effective 7/1/07.

a. Install and operate a SO_2 continuous monitoring system that consists of SO_2 and O_2 monitors and continuously monitor and record the concentration by volume, dry basis, zero percent excess air, of SO_2 emissions into the atmosphere from EU Groups 1, 4, 5, and 6.

[40 C.F.R. 60.105(a)(3)]

b. Install and operate a H_2S continuous monitoring system to continuously monitor and record the concentration by volume of H_2S in the fuel gas combusted in EU Group 8.

[40 C.F.R. 60.105(a)(3)]

c. For the SO_2 CEMS for EU Groups 1, 4, 5, 6 and H_2S CEMS for fuel gas combustion units in service of a petroleum refinery as defined by 40 C.F.R. 60.100, conduct Performance Evaluations in accordance with 40 C.F.R. 60.105(a)(3) and (4) respectively.

[40 C.F.R. 60.105(a)(3)]

d. In conducting the performance tests required in 40 C.F.R. 60.8, the Permittee shall follow the applicable requirements under 40 C.F.R. 60.106.

[40 C.F.R. 60.106]

61.5 Recordkeeping and Reporting. The Permittee shall:

[40 C.F.R. 60.107, Subpart J]

a. Excess emissions shall be determined and reported in accordance with Conditions 14.3b and 27.

[40 C.F.R. 60.105(e)(3)]

b. For any periods for which SO_2 or oxides emissions data are not available, the owner or operator of the affected facility shall submit a signed statement to the Administrator 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)]

c. For each fuel gas stream combusted in a fuel gas combustion device subject to 40 C.F.R. 60.104(a)(1), if an owner or operator determines that one of the exemptions listed in 40 C.F.R. 60.105(a)(4)(iv) applies to that fuel gas stream, the owner or operator shall maintain records of the specific exemption chosen for each fuel gas stream. If the owner or operator applies for the exemption described in 40 C.F.R. 60.105(a)(4)(iv)(D), the owner or operator must keep a copy of the application as well as the letter from the Administrator granting approval of the application.

[40 C.F.R. 60.108(e)]

d. The owner or operator of an affected facility shall submit the reports required under this subpart to the Administrator semiannually for each six-month period. All semi-annual reports shall be postmarked by the 30th day following the end of each six-month period.

[40 C.F.R. 60.108(f)]

e. The owner or operator of the affected facility shall submit a signed statement certifying the accuracy and completeness of the information contained in the reports to the Administrator.

[40 C.F.R. 60.108(g)]
[18 AAC 50.040(a)(2)(J)]
[40 C.F.R. 60.104(a)(1)]

62. Compliance with the emission limits in Condition 13 will demonstrate compliance with Condition 61.

[40 C.F.R. 60.106I(1)]

62.1 **Quality Assurance Procedures for CEMS.** Evaluate the effectiveness of quality control and quality assurance and the quality of data produced by the SO_2 and H_2S CEMS for fuel gas combustion devices operating in service of a petroleum refinery as defined by 40 C.F.R. 60.100, in accordance with the requirements under Procedure 1 of 40 C.F.R. 60 Appendix F.

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

NSPS Subpart Ja. Standards of Performance for Petroleum Refineries

63. Except for flares, the provisions of NSPS Ja apply only to affected facilities under 40 C.F.R. 60.100a(a) which commence construction, modification, or reconstruction after May 14, 2007. For flares, the provisions of this subpart apply only to flares, which commence construction, modification, or reconstruction, after June 24, 2008.

[18 AAC 50.326(j)(4)]

Asphalt Storage Tanks Subject to NSPS Subpart UU

64. **NSPS Subpart UU Asphalt Storage Tanks.** The Permittee shall not cause or allow emissions from any vent of a storage tank in EU Group 12, shown in Section 2, to exceed zero-percent opacity, except for one consecutive 15-minute period in any 24-hour period while transfer lines are being blown for clearing. The control device, CVM Fume Eliminator System, shall not be bypassed during this 15-minute period.

[18 AAC 50.040(a)(2)(Y)]
[40 C.F.R. 60.472(c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

64.1 Once each day or portion of each day of operation, the Permittee shall inspect all emission points from EU Group 12. The inspection shall be conducted by performing a walk-through of the facility and noting the occurrence of the following in a daily (VE) log:

a. Any visible emissions.

b. Explanation of mechanical failure or equipment malfunction that resulted in visible emissions.

[40 C.F.R. 60.473(c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

64.2 During the periods of operation of emission sources in EU Group 12, monitor operations and maintenance of the CVM Fume Eliminator System in conformance with the following:

On a daily basis:

a. Ensure blowers are running.

b. Ensure proper suction valve lineup.

c. Check for presence of smoke from opacity filt’rs' stack. If smoke is observed, prepare a work order to repair the system as soon as practicable.

On a weekly basis:

d. Check line up of filters/blower.

e. Check outlet temperatures of in service blowers.

f. Check the blower discharge damper positions.

g. Check the oil level in the bottom of the filter housings using the sight level glass on the housings.

(i) Pump liquid while watching level in sight glass.

h. Check the pressure drop across the filters using the gauge on the filter housing.

(i) Filter may remain in operation if the differential pressure less than”10" WC.

(ii) If the differential pressure is greater than or equal to’’0" WC replace the filter.

(A) Line up valves and start up offline blower.

(B) Isolate suction valve on filter that needs change out.

(C) Turn off blower and isolate discharge valve on filter that needs change out.

(D) Prep off line filter for maintenance.

i. Recheck area for any abnormal conditions.

64.3 Keep records of the inspection results from the items listed in Conditions 64.1 and 64.2 in accordance with Condition 117.

64.4 Report in accordance with Conditions 121 and 122 any deviations from any of the terms under Condition 64.

[40 C.F.R. 60.473(c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

NSPS Subpart GGG. Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After January 4, 1983, and on or Before November 7, 2006

The meanings of terms in Conditions 65 through 78 have the meanings given in 40 C.F.R. 60, Subparts GGG and VV.

65. Except for equipment that is in benzene service[18] or that does not meet the definition of an affected facility in a petroleum refinery as defined in 40 C.F.R. 60.590(a), EU Groups 18 through 24 shall comply with the requirements of Conditions 66 through 78. For equipment in EU Groups 18 through 24 that is in benzene service, comply with the requirements of 40 C.F.R. 61 Part J. For equipment that does not meet the definition of affected facility in a petroleum refinery, EU Groups 18 through 24 shall comply with the applicable requirements in NESHAP Subpart BBBBBB.

[40 C.F.R. 60.592]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

[18] In benzene service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10-percent benzene by weight.

66. General Standards

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

66.1 Demonstrate compliance with the requirements of Conditions 67 through 75 for all equipment within 180 days of initial startup.

[40 C.F.R. 60.482-1(a)]

66.2 Equipment in vacuum service is excluded from the requirements of Conditions 68 through 75 if it is identified as required in Condition 77.5f.

[40 C.F.R. 60.482-1(d)]

66.3 Equipment that an owner or operator designates as being in VOC service less than 300 hr/yr is excluded from the requirements of Conditions 68 through 75 if it is identified as required in Condition 77.5g and it meets any of the criteria specified below.

[40 C.F.R. 60.482-1(e)]

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.

[40 C.F.R. 60.482-1(e)(1)]

b. The equipment is in VOC service only during process malfunctions or other emergencies.

[40 C.F.R. 60.482-1(e)(2)]

c. The equipment is backup equipment that is in VOC service only when the primary equipment is out of service.

[40 C.F.R. 60.482-1(e)(3)]

67. Pumps in light liquid service. Except for equipment that does not meet the definition an affected facility in a petroleum refinery as defined in 40 C.F.R. 60.590(a), equipment in EU Group 18 shall comply with the following requirements:

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

67.1 Monitor each pump in light liquid service

[40 C.F.R. 60.482-2(a)(1)]

a. monthly to detect leaks by Method 21 as specified in Condition 76.1, except as provided in Conditions 67.4, 67.5, and 67.6.

[40 C.F.R. 60.482-2(a)(1)]

b. for the first time within 30 days after the end of a pumps startup period if the pump begins operation in light liquid service after the initial startup date for the process unit, except as provided in Conditions 67.4, 67.5 and 67.6.

[40 C.F.R. 60.482-2(a)(1)]

c. by visual inspection each calendar week for indications of liquids dripping from the pump seal.

[40 C.F.R. 60.482-2(a)(2)]

(i) Except as provided in Condition 67.1c(ii), if there are indications of liquids dripping from the pump seal, either

[40 C.F.R. 60.482-2(b)(2)]

(A) monitor the pump within 5 days by Method 21 as specified in Condition 76.1, or

[40 C.F.R. 60.482-2(b)(2)(i)]

(B) designate the visual indications of liquids dripping as a leak, and repair the leak within 15 days of detection by eliminating the visual indications of liquids dripping.

[40 C.F.R. 60.482-2(b)(2)(ii)]

(ii) The requirements in Condition 67.1c(i) do not apply to a pump that was monitored after a previous weekly inspection if the instrument reading for that monitoring event was less than 10,000 ppm and the pump was not repaired since that monitoring event.

[40 C.F.R. 60.482-2(b)(2)]

67.2 If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. Repair each leak using the procedures in Condition 67.3.

[40 C.F.R. 60.482-2(b)(1) & 40 C.F.R. 482-2(b)(2)(i)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

67.3 When a leak is detected,

[40 C.F.R. 60.482-2(c)(1)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. repair it as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition 74.

[40 C.F.R. 60.482-2(c)(1)]

b. make a first attempt at repair no later than 5 calendar days after it is detected.

[40 C.F.R. 60.482-2(c)(2)]

67.4 Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of Condition 67.1, provided the requirements specified below are met.

[40 C.F.R. 60.482-2(d)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. Each dual mechanical seal system is

[40 C.F.R. 60.482-2(d)(1)]

(i) operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

[40 C.F.R. 60.482-2(d)(1)(i)]

(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 75; or

[40 C.F.R. 60.482-2(d)(1)(ii)]

(iii) equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

[40 C.F.R. 60.482-2(d)(1)(iii)]

b. The barrier fluid system is in heavy liquid service or is not in VOC service.

[40 C.F.R. 60.482-2(d)(2)]

c. Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

[40 C.F.R. 60.482-2(d)(3)]

d. Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

[40 C.F.R. 60.482-2(d)(4)(i)]

(i) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, follow either procedure specified below.

[40 C.F.R. 60.482-2(d)(4)(ii)]

(A) Monitor the pump within 5 days by Method 21 as specified in Condition 76.1 to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

[40 C.F.R. 60.482-2(d)(4)(ii)(A)]

(B) Designate the visual indications of liquids dripping as a leak.

[40 C.F.R. 60.482-2(d)(4)(ii)(B)]

e. Each sensor as described in Condition 67.4c above is checked daily or is equipped with an audible alarm.

[40 C.F.R. 60.482-2(d)(5)(i)]

(i) 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. 60.482-2(d)(5)(ii)]

(ii) If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established, a leak is detected.

[40 C.F.R. 60.482-2(d)(5)(iii)]

f. Repair a leak detected pursuant to condition:

[40 C.F.R. 60.482-2(d)(6)(i)]

(i) 67.4d(i)(A) above as specified in Condition 67.3.

[40 C.F.R. 60.482-2(d)(6)(i)]

(ii) 67.4e(ii) within 15 days of detection by eliminating the conditions that activated the sensor.

[40 C.F.R. 60.482-2(d)(6)(ii)]

(iii) 67.4d(i)(B) within 15 days of detection by eliminating visual indications of liquids dripping.

[40 C.F.R. 60.482-2(d)(6)(iii)]

67.5 Any pump that is designated, as described in Conditions 77.5a through 77.5c, for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Conditions 67.1, 67.3 and 67.4 if the pump:

[40 C.F.R. 60.482-2(e)]

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. Has no externally actuated shaft penetrating the pump housing;

[40 C.F.R. 60.482-2(e)(1)]

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 Condition 76.2; and

[40 C.F.R. 60.482-2(e)(2)]

c. Is tested for compliance with Condition 67.5b above initially upon designation, annually, and at other times requested.

[40 C.F.R. 60.482-2(e)(3)]

67.6 If any pump is 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 75, it is exempt from Conditions 67.1 through 67.5.

[40 C.F.R. 60.482-2(f)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

67.7 Any pump that is designated, as described in Condition 77.6a, as unsafe-to-monitor is exempt from the monitoring and inspection requirements of Conditions 67.1 and 67.4d through 67.4f if:

[40 C.F.R. 60.482-2(g)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. The pump has been demonstrated to be unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Condition 67.1; and

[40 C.F.R. 60.482-2(g)(1)]

b. A plan is written and followed that requires monitoring as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repaired according to the procedures in Condition 68.3 if a leak is detected.

[40 C.F.R. 60.482-2(g)(2)]

68. Compressors. Except for equipment that does not meet the definition an affected facility in a petroleum refinery as defined in 40 C.F.R. 60.590(a), equipment in EU ID Group 19 shall comply with the following requirements:

68.1 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 68.9 and 68.10.

[40 C.F.R. 60.482-3(a)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

68.2 Each compressor seal system as required in Condition 68.1 shall be:

[40 C.F.R. 60.482-3(b)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

[40 C.F.R. 60.482-3(b)(1)]

b. Equipped 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 75; or

[40 C.F.R. 60.482-3(b)(2)]

c. Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

[40 C.F.R. 60.482-3(b)(3)]

68.3 The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

[40 C.F.R. 60.482-3(c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

68.4 Equip each barrier fluid system as described in Condition 68.1 with a sensor that will detect failure of the seal system, barrier fluid system, or both.

[40 C.F.R. 60.482-3(d)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

68.5 Each sensor as required in Condition 68.4 is

[40 C.F.R. 60.482-3(e)(1)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. checked daily, or

[40 C.F.R. 60.482-3(e)(1)]

b. equipped with an audible alarm.

[40 C.F.R. 60.482-3(e)(1)]

68.6 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. 60.482-3(e)(2)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

68.7 If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined, a leak is detected.

[40 C.F.R. 60.482-3(f)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

68.8 When a leak is detected,

[40 C.F.R. 60.482-3(g)(1), 11/16/07]
[18 AAC 50.040(j), 7/25/08 & 18 AAC 50.326(j)(4), 12/1/04]

a. repair it as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition 74.

[40 C.F.R. 60.482-3(g)(1)]

b. make a first attempt at repair no later than 5 calendar days after it is detected.

[40 C.F.R. 60.482-3(g)(2)]

68.9 A compressor is exempt from the requirements of Conditions 68.1 and 68.2, if it 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 75, except as provided in Condition 68.10.

[40 C.F.R. 60.482-3(h)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

68.10 Any compressor that is designated, as described in Conditions 77.5a through 77.5c, for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of Conditions 68.1 through 68.9 if the compressor:

[40 C.F.R. 60.482-3(i)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. 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 Condition 76.2; and

[40 C.F.R. 60.482-3(i)(1)]

b. is tested for compliance with Condition 68.10a above initially upon designation, annually, and at other times requested.

[40 C.F.R. 60.482-3(i)(2)]

69. Pressure relief devices in gas/vapor service. Except for equipment that does not meet the definition an affected facility in a petroleum refinery as defined in 40 C.F.R. 60.590(a), equipment in EU ID Group 23 shall comply with the following requirements:

69.1 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 Method 21 as specified in Condition 76.2.

[40 C.F.R. 60.482-4(a)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

69.2 After each pressure release,

[40 C.F.R. 60.482-4(b)(1)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. return the pressure relief device to a condition of no detectable emissions, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in Condition 74.

[40 C.F.R. 60.482-4(b)(1)]

b. monitor the pressure relief device no later than 5 calendar days after the pressure release to confirm the condition of no detectable emissions, by Method 21 as specified in Condition 76.2.

[40 C.F.R. 60.482-4(b)(2)]

69.3 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 75 is exempt from Conditions 69.1 and 69.2.

[40 C.F.R. 60.482-4(c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

70. Sampling connection systems. Except for equipment that does not meet the definition an affected facility in a petroleum refinery as defined in 40 C.F.R. 60.590(a), equipment in EU ID Group 24 shall comply with the following requirements:

70.1 Equip each sampling connection system with a closed-purge, closed-loop, or closed-vent system, except as provided in Condition 70.3.

[40 C.F.R. 60.482-5(a)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

70.2 Comply with the requirements specified in Conditions 70.2a through 70.2d below for each closed-purge, closed-loop, or closed-vent system.

[40 C.F.R. 60.482-5(b)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. Gases displaced during filling of the sample container are not required to be collected or captured.

[40 C.F.R. 60.482-5(b)(1)]

b. Cover or close containers that are part of a closed-purge system when not being filled or emptied.

[40 C.F.R. 60.482-5(b)(2)]

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.

[40 C.F.R. 60.482-5(b)(3)]

d. Design and operate each closed-purge, closed-loop, or closed-vent system to either

[40 C.F.R 60.482-5(b)(4)]

(i) return the purged process fluid directly to the process line;

[40 C.F.R. 60.482-5(b)(4)(i)]

(ii) collect and recycle the purged process fluid to a process; or

[40 C.F.R. 60.482-5(b)(4)(ii)]

(iii) capture and transport all the purged process fluid to a control device that complies with the requirements of Condition 75.

[40 C.F.R. 60.482-5(b)(4)(iii)]

70.3 In situ sampling systems and sampling systems without purges are exempt from the requirements of Conditions 70.1 and 70.2.

[40 C.F.R. 60.482-5(c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

71. Open-ended valves or lines. Except for equipment that does not meet the definition an affected facility in a petroleum refinery as defined in 40 C.F.R. 60.590(a), equipment in EU ID Group 22 shall comply with the following requirements:

71.1 Equip each open-ended valve or line with a cap, blind flange, plug or a second valve, except as provided in Conditions 71.5, 71.6, and 71.7.

[40 C.F.R. 60.482-6(a)(1)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

71.2 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. 60.482-6(a)(2)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

71.3 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. 60.482-6(b)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

71.4 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 71.1 at all other times.

[40 C.F.R. 60.482-6(c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

71.5 Open-ended valves or lines containing asphalt are exempt from the requirements of Conditions 71.1 through 71.4.

[40 C.F.R. 60.593(a) & (f)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

71.6 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 71.1 through 71.4.

[40 C.F.R. 60.482-6(d)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

71.7 Open-ended valves or lines containing materials which 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 71.1 through 71.4 are exempt from the requirements of Conditions 71.1 through 71.4.

[40 C.F.R. 60.482-6(e)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

72. Valves in gas/vapor service and in light liquid service, alternative standards for valves: allowable percentage of valves leaking. Except for equipment that does not meet the definition an affected facility in a petroleum refinery as defined in 40 C.F.R. 60.590(a), equipment in EU ID Group 21 shall comply with the following requirements:

72.1 For a given process unit, do not exceed a leak percentage of 2.0 percent.

[40 C.F.R. 60.592(b) & 40 C.F.R. 60.483-1(a) & (d)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

72.2 For all process units combined, do not exceed a leak percentage of 1.0 percent.

[40 C.F.R. 60.592(b) & 40 C.F.R. 60.483-1(a) & (d)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

72.3 Monitor any new valve within 30 days of being placed into service.

[40 C.F.R. 60.482-7(a)(2) & 40 C.F.R. 60.485(h)(4)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

72.4 Conduct a performance test initially upon designation, annually, and at other times as requested in the following manner:

[40 C.F.R. 60.483-1(b)(2) & (c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by Method 21 as specified in Condition 76.1, except as provided in Conditions 72.7 and 72.8.

[40 C.F.R. 60.483-1(c)(1)]

b. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

[40 C.F.R. 60.483-1(c)(2)]

c. Determine the leak percentage as described in Condition 76.7.

[40 C.F.R. 60.483-1(c)(3) & (d)]

72.5 Monitor the tank farm as a separate process unit according to Conditions 72.1 through 72.4.

[40 C.F.R. 60.482-1(g)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

72.6 When a leak is detected,

[40 C.F.R. 60.483-1(b)(3) & 40 C.F.R. 60.482-7(d)(1)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. repair it as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in Condition 74.

[40 C.F.R. 60.483-7(d)(1)]

b. make a first attempt at repair no later than 5 calendar days after it is detected.

[40 C.F.R. 60.483-7(d)(2)]

72.7 Any valve that is designated, as described in Condition 77.6a, as an unsafe-to-monitor valve is exempt from the requirements of Conditions 72.3 and 72.4 if:

[40 C.F.R. 60.482-7(g)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. The Permittee demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Conditions 72.3 and 72.4; and

[40 C.F.R. 60.482-7(g)(1)]

b. The Permittee adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

[40 C.F.R. 60.482-7(g)(2)]

72.8 Any valve that is designated, as described in Condition 77.6b, as a difficult-to-monitor valve is exempt from the requirements of Conditions 72.3 and 72.4 if:

[40 C.F.R. 60.482-7(h)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. It is demonstrated that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface;

[40 C.F.R. 60.482-7(h)(1)]

b. The process unit within which the valve is located either becomes an affected facility through 40 CFR 60.14 or 40 CFR 60.15, or the Permittee designates less than 3.0 percent of the total number of valves as difficult-to-monitor; and

[40 C.F.R. 60.482-7(h)(2)]

c. A plan is written and followed that requires monitoring of the valve at least once per calendar year.

[40 C.F.R. 60.482-7(h)(3)]
[40 C.F.R. 60.483-1(d)]

73. Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors. Except for equipment that does not meet the definition an affected facility in a petroleum refinery as defined in 40 C.F.R. 60.590(a), equipment in EU ID Group 20 shall comply with the following requirements:

73.1 Follow either one of the following procedures if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors:

[40 C.F.R. 60.482-8(a)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. Monitor the equipment within 5 days by Method 21 as specified in Condition 76.1 and comply with the requirements of Conditions 73.2 and 73.3, or

[40 C.F.R. 60.482-8(a)(1)]

b. Eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection.

[40 C.F.R. 60.482-8(a)(2)]

73.2 If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

[40 C.F.R. 60.482-8(b)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

73.3 When a leak is detected,

[40 C.F.R. 60.482-8(c)(1)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. repair it as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Condition 74, and

[40 C.F.R. 60.482-8(c)(1)]

b. make the first attempt at repair no later than 5 calendar days after it is detected.

[40 C.F.R. 60.482-8(c)(2)]

74. Delay of repair.

74.1 Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair this equipment before the end of the next process unit shutdown and monitor within 15 days after startup of the process unit.

[40 C.F.R. 60.482-9(a)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

74.2 The Permittee may delay repair of equipment, for equipment that is isolated from the process and does not remain in VOC service.

[40 C.F.R. 60.482-9(b)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

74.3 Delay of repair for valves is allowed if

[40 C.F.R. 60.482-9(c)(1)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. demonstration is made that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair; and

[40 C.F.R. 60.482-9(c)(1)]

b. when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with Condition 75.

[40 C.F.R. 60.482-9(c)(2)]

74.4 Delay of repair for pumps is allowed if

[40 C.F.R. 60.482-9(d)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. repair requires the use of a dual mechanical seal system that includes a barrier fluid system; and

[40 C.F.R. 60.482-9(d)(1)]

b. repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

[40 C.F.R. 60.482-9(d)(2)]

74.5 When delay of repair is allowed for a leaking pump or valve that remains in service, the pump or valve 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. 60.482-9(f)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

75. Closed vent systems and control devices.

75.1 Closed vent systems and control devices used to comply with Conditions 66 through 74 shall comply with the following requirements:

[40 C.F.R. 60.482-10(a)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

75.2 Flares used to comply with this subpart shall comply with the requirements of Condition 87.

[40 C.F.R. 60.482-10(d)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

75.3 Monitor control devices used to comply with Conditions 66 through 74 to ensure that they are operated and maintained in conformance with their designs.

[40 C.F.R. 60.482-10(e)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

75.4 Except as provided in Conditions 75.7 through 75.9, inspect each closed vent system as follows:

[40 C.F.R. 60.482-10(f)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. Conduct an initial inspection by Method 21 according to the procedures in Condition 76.1; and

[40 C.F.R. 60.482-10(f)(1)(i)]

b. Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

[40 C.F.R. 60.482-10(f)(1)(ii)]

75.5 Repair leaks as soon as practicable except as provided in Condition 75.6. Leaks are indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspection.

[40 C.F.R. 60.482-10(g)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. Make a first attempt at repair no later than 5 calendar days after the leak is detected.

[40 C.F.R. 60.482-10(g)(1)]

b. Complete repair no later than 15 calendar days after the leak is detected.

[40 C.F.R. 60.482-10(g)(2)]

75.6 The Permittee may delay repair of a closed vent system for which leaks have been detected if the repair is technically infeasible without a process unit shutdown or if the Permittee 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. 60.482-10(h)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

75.7 Vapor collection systems or closed vent systems that are operated under a vacuum are exempt from the inspection requirements of Condition 75.4.

[40 C.F.R. 60.482-10(i)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

75.8 Any part of a closed vent system that is designated, as described in Condition 75.10a, as unsafe to inspect is exempt from the inspection requirements of Condition 75.4 if it complies with the requirements specified in Conditions 75.8a and 75.8b below:

[40 C.F.R. 60.482-10(j)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. The equipment is determined to be unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with Condition 75.4; and

[40 C.F.R. 60.482-10(j)(1)]

b. A plan is written and followed that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

[40 C.F.R. 60.482-10(j)(2)]

75.9 Any part of a closed vent system that is designated, as described in Condition 75.10b, as difficult to inspect is exempt from the inspection requirements of Condition 75.4 if it complies with the requirements specified in Conditions 75.9a through 75.9c below:

[40 C.F.R. 60.482-10(k)]

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. The equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

[40 C.F.R. 60.482-10(k)(1)]

b. The process unit within which the closed vent system is located becomes an affected facility through 40 C.F.R. 60.14 or 40 C.F.R. 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

[40 C.F.R. 60.482-10(k)(2)]

c. A plan is written and followed that requires inspection of the equipment at least once every five years. A closed vent system is exempt from inspection if it is operated under a vacuum.

[40 C.F.R. 60.482-10(k)(3)]

75.10 Record the information specified in Conditions 75.10a through 75.10e below.

[40 C.F.R. 60.482-10(l)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. Identification of all parts of a closed vent system that is designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

[40 C.F.R. 60.482-10(l)(1)]

b. Identification of all parts of a closed vent system that is designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

[40 C.F.R. 60.482-10(l)(2)]

c. Record the information specified in Condition 77.3 for each inspection during which a leak is detected.

[40 C.F.R. 60.482-10(l)(3)]

d. Record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected for each Method 21 inspection conducted in accordance with Condition 76.1 during which no leaks are detected.

[40 C.F.R. 60.482-10(l)(4)]

e. Record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected for each visual inspection conducted in accordance with Condition 75.4b during which no leaks are detected.

[40 C.F.R. 60.482-10(l)(5)]

75.11 Operate closed vent systems and control devices used to comply with Conditions 66 through 74 at all times when emissions may be vented to them.

[40 C.F.R. 60.482-10(m)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

76. Test methods and procedures.

[40 C.F.R. 60.592(e)]

76.1 Determine compliance with the standards in Conditions 66 through 75 as follows:

[40 C.F.R. 60.485(b)]

a. Use Method 21 in 40 C.F.R. 60 Appendix A to determine the presence of leaking sources. Calibrate the instrument before use each day of its use by the procedures specified in Method 21. Use the following calibration gases:

[40 C.F.R. 60.485(b)(1)]

(i) Zero air (less than 10 ppm of hydrocarbon in air); and

[40 C.F.R. 60.485(b)(1)(i)]

(ii) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane.

[40 C.F.R. 60.485(b)(1)(ii)]

76.2 Determine compliance with the no detectable emission standards in Conditions 67.5, 68.10, 69, and 75.5 as follows:

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

a. The Method 21 requirements of Condition 76.1 apply.

[40 C.F.R. 60.485(c)(1)]

b. Use Method 21 to determine the background level. Traverse all potential leak interfaces as close to the interface as possible. Determine compliance by comparing the arithmetic difference between the maximum concentration indicated by the instrument and the background level with 500 ppm.

[40 C.F.R. 60.485(c)(2)]

76.3 Test each piece of equipment unless a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10-percent by weight. For purposes of this demonstration, follow the methods and procedures in 40 C.F.R. 60.485(d).

[40 C.F.R. 60.485(d)]

76.4 Equipment is in light liquid service if the percent evaporated is greater than 10-percent at 150°C as determined by the methods listed in 40 C.F.R. 60.593(d).

[40 C.F.R. 60.592(d), 40 C.F.R. 60.593(a) & (d), & 40 C.F.R. 60.485(e)]

76.5 Use representative samples of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare in conjunction with Conditions 76.3, 76.4, and 76.6.

[40 C.F.R. 60.485(f)]

76.6 Determine compliance with the flare standards per Condition 87.

[40 C.F.R. 60.18, 40 C.F.R. 60.485(g)]

76.7 Determine compliance with Condition 72.4c as follows:

[40 C.F.R. 60.485(h)]

a. Determine the percent of valves leaking using Equation 23:

Equation 23 $\%V_L = (V_L/V_T) * 100$

Where
$\%V_L$= Percent leaking valves
V_L = Number of valves found leaking
V_T = The sum of the total number of valves monitored

[40 C.F.R. 60.485(h)(1)]

b. Include in the total number of valves monitored the difficult-to-monitor and unsafe-to-monitor valves only during the monitoring period in which those valves are monitored.

[40 C.F.R. 60.485(h)(2)]

c. Include in the number of valves found leaking the valves for which repair has been delayed.

[40 C.F.R. 60.485(h)(3)]

d. Do not include in the total number of valves monitored a valve monitored to verify repair.

[40 C.F.R. 60.485(h)(6)]

77. Recordkeeping requirements.

[40 C.F.R. 60.592(e)]

77.1 Comply with the recordkeeping requirements of Condition 77.

[40 C.F.R. 60.486(a)]

77.2 When each leak is detected as specified in Conditions 67, 68, and 73, the following requirements apply:

[40 C.F.R. 60.486(b)]

a. Attach a weatherproof and readily visible identification, marked with the equipment identification number, to the leaking equipment.

[40 C.F.R. 60.486(b)(1)]

b. The identification on equipment may be removed after it has been repaired.

[40 C.F.R. 60.486(b)(3)]

77.3 Record in a log that is kept in a readily accessible location the information in Conditions 77.3a through 77.3i below when a leak is detected as specified in Conditions 67, 68, 72, and 73:

[40 C.F.R. 60.486(c)]

a. The instrument and operator identification numbers, and the equipment identification number.

[40 C.F.R. 60.486(c)(1)]

b. The date the leak was detected and the dates of each attempt to repair the leak.

[40 C.F.R. 60.486(c)(2)]

c. Repair methods applied in each attempt to repair the leak.

[40 C.F.R. 60.486(c)(3)]

d. "Above 10,000" if the maximum instrument reading measured by the methods specified in Condition 76.1 after each repair attempt is equal to or greater than 10,000 ppm.

[40 C.F.R. 60.486(c)(4)]

e. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

[40 C.F.R. 60.486(c)(5)]

f. The signature of the Permittee's owner, operator or designate that the repair could not be effected without a process shutdown.

[40 C.F.R. 60.486(c)(6)]

g. The expected date of successful repair of the leak if a leak is not repaired within 15 days.

[40 C.F.R. 60.486(c)(7)]

h. Dates of process unit shutdowns that occur while the equipment is unrepaired.

[40 C.F.R. 60.486(c)(8)]

i. The date of successful repair of the leak.

[40 C.F.R. 60.486(c)(9)]

77.4 Record and keep in a readily accessible location the following information pertaining to the design requirements for closed vent systems and control devices described in Condition 75:

[40 C.F.R. 60.486(d)]

a. Detailed schematics, design specifications, and piping and instrumentation diagrams.

[40 C.F.R. 60.486(d)(1)]

b. Dates and descriptions of changes in the design specifications.

[40 C.F.R. 60.486(d)(2)]

c. A description of the parameter or parameters monitored, as required in Condition 75.5, 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.

[40 C.F.R. 60.486(d)(3)]

d. Periods when the closed vent systems and control devices required in Conditions 67, 68, 69, and 70 are not operated as designed, including periods when a flare pilot light does not have a flame.

[40 C.F.R. 60.486(d)(4)]

e. Dates of startups and shutdowns of the closed vent systems and control devices required in Conditions 67, 68, 69, and 70.

[40 C.F.R. 60.486(d)(5)]

77.5 Record in a log that is kept in a readily accessible location the following information pertaining to all equipment subject to the requirements in Conditions 66 to 75:

[40 C.F.R. 60.486(e)]

a. A list of identification numbers for equipment subject to the requirements of this subpart.

[40 C.F.R. 60.486(e)(1)]

b. A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of Conditions 67.5 and 68.10.

[40 C.F.R. 60.486(e)(2)(i)]

c. The signature of the Permittee's owner, operator or designate authorizing the designation of equipment for no detectable emissions as subject to the requirements of Conditions 67.5 or 68.10. Alternatively, the Permittee may establish a mechanism with the Department that satisfies this requirement.

[40 C.F.R. 60.486(e)(2)(ii)]

d. A list of equipment identification numbers for pressure relief devices required to comply with Condition 69.

[40 C.F.R. 60.486(e)(3)]

e. For compliance tests

[40 C.F.R. 60.486(e)(4)]

(i) The dates of each compliance test as required in Conditions 67.5, 68.10, and 69.

[40 C.F.R. 60.486(e)(4)(i)]

(ii) The background level measured during each compliance test.

[40 C.F.R. 60.486(e)(4)(ii)]

(iii) The maximum instrument reading measured at the equipment during each compliance test.

[40 C.F.R. 60.486(e)(4)(iii)]

f. A list of identification numbers for equipment in vacuum service.

[40 C.F.R. 60.486(e)(5)]

g. A list of identification numbers for equipment that is designated as operating in VOC service less than 300 hr/yr in accordance with Condition 66.3, 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.

[40 C.F.R. 60.486(e)(6)]

77.6 Record in a log that is kept in a readily accessible location the following information pertaining to all valves subject to the requirements of Conditions 72.7 and 72.8 and to all pumps subject to the requirements of Condition 67.7:

[40 C.F.R. 60.486(f)]

a. A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.

[40 C.F.R. 60.486(f)(1)]

b. A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.

[40 C.F.R. 60.486(f)(2)]

77.7 Record in a log that is kept in a readily accessible location the following information:

[40 C.F.R. 60.486(h)]

a. Design criterion required in Conditions 67.4e and 68.6 and an explanation of the design criterion; and

[40 C.F.R. 60.486(h)(1)]

b. Changes to the criterion and the reasons for the changes.

[40 C.F.R. 60.486(h)(2)]

77.8 Record in a log that is kept in a readily accessible location the information and data used to demonstrate that a piece of equipment is not in VOC service.

[40 C.F.R. 60.486(j)]

77.9 The provisions of 40 C.F.R. 60.7(b) and (d) do not apply to affected facilities subject to Conditions 66 through 78.

[40 C.F.R. 60.486(k)]

78. Reporting requirements.

78.1 Submit semiannual reports to the Department that include the following information, summarized from the information in Condition 77:

[40 C.F.R. 60.487(a) & 40 C.F.R. 60.487(c)]

a. Process unit identification.

[40 C.F.R. 60.487(c)(1)]

b. For each month during the semiannual reporting period;

[40 C.F.R. 60.487(c)(2)]

(i) Number of valves for which leaks were detected as described in Condition 72.4b;

[40 C.F.R. 60.487(c)(2)(i)]

(ii) Number of valves for which leaks were not repaired as required in Condition 72.6;

[40 C.F.R. 60.487(c)(2)(ii)]

(iii) Number of pumps for which leaks were detected as described in Conditions 67.1c, 67.2, 67.4d(i)(A) or 67.4d(i)(B), or 67.4e(ii).

[40 C.F.R. 60.487(c)(2)(iii)]

(iv) Number of pumps for which leaks were not repaired as required in Conditions 67.3a and 67.4f;

[40 C.F.R. 60.487(c)(2)(iv)]

(v) Number of compressors for which leaks were detected as described in Condition 68.7;

[40 C.F.R. 60.487(c)(2)(v)]

(vi) Number of compressors for which leaks were not repaired as required in Condition 68.8a; and

[40 C.F.R. 60.487(c)(2)(vi)]

(vii) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

[40 C.F.R. 60.487(c)(2)(vii)]

c. Dates of process unit shutdowns that occurred within the semiannual reporting period.

[40 C.F.R. 60.487(c)(3)]

d. Revisions to

[40 C.F.R. 60.487(c)(4) & 40 C.F.R 60.487(b)]

(i) Process unit identifications.

[40 C.F.R. 60.487(b)(1)]

(ii) Number of valves subject to Condition 72.

[40 C.F.R. 60.487(b)(2)]

(iii) Number of pumps subject to Condition 67, excluding pumps designated for no detectable emissions under the provisions of Condition 67.5 and pumps complying with Condition 67.6.

[40 C.F.R. 60.487(b)(3)]

(iv) Number of compressors subject to Condition 68, excluding compressors designated for no detectable emissions under the provisions of Condition 68.10 and compressors complying with Condition 68.9.

[40 C.F.R. 60.487(b)(4)]

78.2 Report the results of all performance tests in accordance with 40 C.F.R. 60.8. The provisions of 40 C.F.R. 60.8(d) do not apply to affected facilities subject to the provisions of Conditions 66 through 78 except that notification to the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests must occur.

[40 C.F.R. 60.487(e)]

79. NSPS Subpart GGGa. Equipment Leaks of VOC in Petroleum Refineries.

79.1 Affected facilities as defined in 40 C.F.R. 60.590a for which construction, reconstruction, or modification commenced after November 7, 2006 will be subject to NSPS GGGa and shall comply with the applicable provisions therein.

[40 C.F.R. 60.590a & 40 C.F.R. 60.593a]
[18 AAC 50.040(j)(4)]
[40 C.F.R. 71.6(c)(3)]

Petroleum Refinery Wastewater Systems Subject to NSPS Subpart QQQ — EU Groups 26 and 27.

80. Individual Drain Systems.

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

[40 C.F.R. 60.692-2]

80.1 For individual drain systems, oil-water separators and aggregate facilities at an affected facility as defined in 40 C.F.R. 60.691, the Permittee shall equip each drain with water seal controls.

a. At least once each month, inspect the individual drains and drain systems for low water level or other conditions that would reduce the effectiveness of water seal controls.

b. If the drain is out of active service, as defined in 40 C.F.R. 60.691,

(i) make inspections weekly for indications of low water level or other problems that could result in VOC emissions; or

(ii) in place of a water seal, install a cap or plug over the drain, and do inspections at least once every six months to ensure the cap or plug is in place and properly installed.

c. Add water if the level in a drain is low. If a cap or plug is missing or not properly installed, make first efforts at repair as soon as practicable but not later than 24 hours after discovery, except as allowed by Condition 82.

80.2 The Permittee shall equip each junction box in any individual drain systems which meet the definition of an affected facility as defined in 40 C.F.R 60.691 with a cover, which may have an open vent pipe. The vent pipe must not exceed four inches in diameter, and must be at least three feet in length.

a. Each junction box cover shall have a tight seal around the edge, and shall be kept in place at all times except during inspection and maintenance.

b. Inspect each junction box initially and at least once in each six calendar months to ensure that the cover is in place and has a tight seal around the edge.

c. If a broken seal or gap is discovered, the first effort at repair shall be made as soon as practicable, but not later than 15 calendar days after the broken seal or gap is discovered, except as allowed by Condition 82.

80.3 The Permittee shall not allow sewer lines in any individual drain systems which meet the definition of an affected facility as defined in 40 C.F.R 60.691 to be open to the atmosphere, and shall cover or enclose the sewer lines in a manner so as to have no visual gaps or cracks in joints, seals or other emission interfaces.

a. Visually inspect the unburied portion of each sewer line initially and at least once in each six calendar months for any cracks, gaps, or other conditions that could result in VOC emissions.

b. Whenever a crack, gap, or other problem is detected, the Permittee shall make repairs as soon as practicable, and not later than 15 calendar days after discovery, except as allowed by Condition 82.

c. Refinery wastewater routed through new process drains and a new first common downstream junction box, either as part of a new individual drain system or an existing individual drain system, shall not be routed through an open downstream catch basin.

81. Oil-Water Separators. The Permittee shall equip and operate each oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment which meets the definition of an affected facility as defined in 40 C.F.R. 60.691 with a fixed roof that completely covers the tank with no separation between the roof and the walls. Each oil-water separator tank or other auxiliary equipment's current treatment design capacity is less than 250 gallons per minute.

[18 AAC 50.040(a)(2)(GG)]
[40 C.F.R. 60.692-3]

81.1 Keep access doors or openings gasketed, latched, and closed at all times during operation of the separator system except during inspection and maintenance.

81.2 Do not purge the vapor space unless the vapor is directed to an emission control device.

81.3 Inspect roof seals, access doors, and other openings by visual inspection at least once in each six months to ensure that no cracks or gaps occur between the roof and wall, any access doors or other openings are closed, and the gaskets are properly installed.

81.4 Make first attempt at repair of any broken seal or gasket, or other leak sources, as soon as practicable, but no later than 15 days after discovery, except as allowed by Condition 82.

81.5 Collect, store, transport, recycle, reuse, or dispose of slop oil and oily wastewater from an oil-water separator tank and slop oil handling equipment 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 Conditions 80 through 86. Equipment used in handling slop oil shall be equipped with a fixed roof meeting the requirements of Condition 81.

81.6 Set the pressure control valve for each oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment that complies with Condition 81 at the maximum pressure necessary for proper system operation, but such that the valve will not vent continuously.

82. The Permittee shall be allowed to delay a repair to a source in individual drain systems, oil-water separators and aggregate facilities at an affected facility as defined in 40 C.F.R. 60.691if the repair is not technically possible without a complete or partial refinery or process unit shutdown, in which case the repair shall occur before the end of the next refinery or process unit shutdown.

[18 AAC 50.040(a)(2)(GG)]
[40 C.F.R. 60.692-6]

83. The Permittee shall keep any applicable records required by Condition 117.2, and

[18 AAC 50.040(a)(2)(GG)]
[40 C.F.R. 60.697]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

83.1 keep records of each location, date, problem found, and corrective action taken for:

a. each drain when the water seal is dry or otherwise breached, when a cap or plug is missing or improperly installed, or other problems that could result in VOC emissions is identified during periodic or physical inspections;

b. junction boxes (sumps), when a broken seal, gap, or other problem that could result in VOC emissions is identified during inspections; and

c. sewer lines and oil-water separators, when a problem is identified that could result in VOC emissions is identified during inspections.

83.2 for defects listed in Condition 83.1a that were not repaired in 24 hours, or for other defects listed in Condition 83.1 that were not repaired in 15 days, keep records of:

a. the defect;

b. the expected date of a successful repair;

c. the reason for delay;

d. the signature of the owner, operator, or designated authority who made the decision that the repair could not be made without refinery or process unit shutdown; and

e. the date of repair or successful corrective action.

83.3 keep, in a readily accessible location for the life of the source:

a. a copy of the design specifications of all equipment used to comply with 40 C.F.R. 60, Subpart QQQ, including:

(i) detailed schematics, and piping and instrumentation diagrams; and

(ii) dates and descriptions of changes in the design specifications;

b. for caps or plugs used for out of service drains in lieu of water seals, plans or specifications indicating the locations of such drains; and

c. for stormwater sewer systems, ancillary equipment, and non-contact cooling water systems built after May 4, 1987 and not complying with 40 C.F.R. 60, Subpart QQQ, plans or specifications showing that:

(i) no wastewater from process units or equipment discharges directly into the stormwater sewer system;

(ii) the ancillary equipment does not come into contact with or store oily wastewater; and

(iii) the cooling water does not come into contact with hydrocarbons or oily wastewater and is not re-circulated through a cooling tower.

84. The Permittee shall report using Condition 121, as deviations from permit conditions, each time:

84.1 a required repair or corrective action under Conditions 80 or 81 was not made within the time limit in those conditions, and could have been made without a process unit shutdown; and a required repair or corrective action under Conditions 80 or 81 that could only be made with a shutdown, was not made during the next shutdown after discovering the problem.

[40 C.F.R. 60.692-6]

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

85. The Permittee shall send to EPA Region 10 semiannually, a report certifying that all required inspections have been carried out in accordance with Conditions 80 and 81, and including for that reporting period:

[18 AAC 50.040(a)(2)(GG)]
[40 C.F.R. 60.698(c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

85.1 a summary of all inspections when a water seal was dry or otherwise breached, a drain cap or plug was missing or improperly installed, or cracks, gaps, or other problems were identified that could result in VOC emissions; and

85.2 information about repairs or corrective actions taken.

86. Include copies of the report sent to EPA Region 10 under Condition 85 with the facility operating report required under Condition 122.

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

Emission Units/Stationary Sources Subject to Federal National Emission Standards for Hazardous Air Pollutants (NESHAPs)

87. NESHAP Subparts J and V and NSPS Subpart GGG. Flare and Closed Vent System Leading to Flare. The Permittee shall design and operate the flare EU Group 8 with no visible emissions, according to Conditions 87.1, 87.2, 87.5, and 87.6, except for periods not to exceed a total of five minutes during any two consecutive hours.

[18 AAC 50.040(a)(1), (a)(2)(Z), & (a)(2)(BB); 18 AAC 50.040(b)(1), (b)(2)(B), & (b)(2)(C)]
[40 C.F.R. 60.18(c)(1)]
[40 C.F.R. 61.242-11(d)]
[40 C.F.R. 61.112(a)]

87.1 Observe emissions using 40 C.F.R. Part 60, Appendix A, Reference Method 22 from data obtained by the surveillance camera. Review the surveillance cam’ra's recording for visible emissions after flaring occurs. Make observations for each such event, except that they need not be made more than once in any calendar month or in any month that flaring does not occur. Observation duration shall be for two hours, excluding breaks allowed by Method 22, a total of five minutes of visible emissions during any two consecutive hours, or to the end of flaring, whichever ends sooner.

[40 C.F.R. 60.11(c), 40 C.F.R. 60.18(c)(1), & 40 C.F.R. 60.18(f)(1)]
[40 C.F.R. 61.242-11(d)]
[40 C.F.R. 61.112(a)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

87.2 Flares shall be operated with a pilot flame present at all times. Monitor the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame.

[40 C.F.R. 60.18(c)(2) & 40 C.F.R. 60.18(f)(2)]
[40 C.F.R. 61.242-11(d)]
[40 C.F.R. 61.112(a)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

87.3 Monitor the flare to ensure that it is operated and maintained in conformance with its design. Applicable conditions will provide provisions stating how owners or operators of the flare shall monitor these control devices.

[40 C.F.R. 60.18(d)]
[40 C.F.R. 61.242-11(d)]
[40 C.F.R. 61.112(a)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

87.4 Operate the flare at all times that emissions may be vented to it.

[40 C.F.R. 60.18(e)]
[40 C.F.R. 61.242-11(d)]
[40 C.F.R. 61.112(a)]

87.5 The Permittee shall ensure that the fuel gas combusted in the flare has a minimum net heating value (H_T) of 11.2 MJ/scm (300 Btu/scf) if the flare is steam-assisted or air-assisted, or has a minimum net heating value of 7.45 MJ/scm (200 Btu/scf) if the flare is non-assisted. The net heating value of the fuel gas shall be determined using **Equation 24**. Keep records showing the heat content of any gas or vapor that could be vented to the flare has a heat content of at least 300 btu/scf.

Equation 24 $H_T = K \sum_{I=1}^{N} C_i H_i$

(which is equivalent to:

$H_T = K[(C_1 \times H_1) + (C_2 \times H_2) + (C_3 \times H_3) + \ldots + (C_i + H_i)]$**)**

Where

H_T	=	net heating value (MJ/scm); where the net enthalpy per mole of offgas is based on combustion at 25ºC and 760 mm Hg., but the standard temperature for determining the volume corresponding to one mole is 20ºC.
i	=	a numerical sequence of 1, 2, 3, ... on up to "N",
N	=	total number of samples or readings,
K	=	constant = 1.74 x10^{-7} (1/ppm)(gmole/scm)(MJ/kcal), where the standard temperature for (gmole/scm) is 20°C,
C_i	=	concentration of sample component *i* in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1947-77 or 90 (incorporated by reference through 40 C.F.R. 60.17), and
H_i	=	net heat of combustion of sample component *i*, kcal/g-mole @ 25ºC and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95

(incorporated by reference through 40 C.F.R. 60.17) if published values are not available or cannot be calculated.

[40 C.F.R. 60.18(c)(3)(ii) & 40 C.F.R. 60.18(f)(3)]
[40 C.F.R. 61.242-11(d)]
[40 C.F.R. 61.112(a)]

87.6 Design and operate the air-assisted flare with an exit velocity that is less than the maximum velocity (V_{max}), determined by Equation 25, and determine the actual exit velocity of a flare by dividing the volumetric flow-rate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C or 2D as appropriate, by the unobstructed (free) cross sectional area of the flare tip. Keep records of the most recent test using the above reference methods that show that the actual velocity is less than the maximum permitted velocity.

Equation 25 $V_{\max} = 8.706 + 0.7084(H_T)$

Where
V_{max} = maximum permitted velocity (m/sec), and
H_T = net heating value (MJ/scm)
8.706 = *constant*
0.7084 = *constant*

[40 C.F.R. 60.18(c)(5), (f)(4), & (f)(6)]

87.7 Perform annual inspections using visual, audible or olfactory means for indications of leaks from the flare's closed vent system.

[40 C.F.R. 60.592]
[40 C.F.R. 60.482-10(f)(1)(ii)]

87.8 Except as provided in Condition 87.9, leaks found in the flare's closed vent system as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections shall be repaired as soon as practicable, as follows:

a. The first attempt at repair shall be made no later than 5 calendar days after the leak is detected; and

b. the repair shall be completed no later than 15 calendar days after the leak is detected.

[40 C.F.R. 60.592]
[40 C.F.R. 60.482-10(g), (g)(1), & (g)(2)]

87.9 Delay of repair of a leak found in the flare's closed vent system under Condition 87.7 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. 60.592]
[40 C.F.R. 60.482-10(h)]

87.10 In addition to any applicable records required by Condition 117.2; for each inspection during which a leak is detected, the following information shall be recorded in a log and shall be kept for 5 years in a readily accessible location:

[40 C.F.R. 60.592]
[40 C.F.R. 60.482-10(l)(3)]
[40 C.F.R. 60.486(c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. the instrument and operator identification numbers and the equipment identification number;

b. the date the leak was detected and the dates of each attempt to repair the leak;

c. repair methods applied in each attempt to repair the leak;

d. "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 C.F.R. 60.485(a) after each repair attempt is equal to or greater than 10,000 ppm;

e. "repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak;

f. the signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown;

g. the expected date of successful repair of the leak if a leak is not repaired within 15 days;

h. the dates of process unit shutdown that occur while the equipment is unrepaired; and

i. the date of successful repair of the leak.

87.11 The following information pertaining to the design requirements for closed vent systems and control devices described in Condition 75 shall be recorded and kept in a readily accessible location:

a. Detailed schematics, design specifications, and piping and instrumentation diagrams.

b. The dates and descriptions of any changes in the design specifications.

c. A description of the parameter or parameters monitored, as required in Condition 75, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

d. Periods when the closed vent systems and control devices covered under Condition 75 are not operated as designed, including periods when a flare pilot light does not have a flame.

87.12 Report deviations from Conditions 87.1 through 87.11 under Condition 121.

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

Benzene Waste Operations Subject to NESHAP Subpart FF

88. 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). 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. 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. Other specific requirements for calculating the total annual benzene waste quantity are as follows:

[40 C.F.R. 61.342(a)]
[18 AAC 50.040(b)(2)(E)]
[18 AAC 50.326(j)(4)]

88.1 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.

[40 C.F.R. 61.342(a)(2)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

88.2 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.

[40 C.F.R. 61.342(a)(2)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

88.3 Include in the calculation of total annual benzene quantity the benzene in wastes generated by remediation activities managed at the stationary source when the remediation waste was generated offsite, if the waste streams have an annual average water content greater than 10 percent, or if they are mixed with water or other wastes at any time and the mixture has an annual average water content greater than 10-percent.

[40 C.F.R. 61.342(a)(3)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

88.4 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.

[40 C.F.R. 61.342(a)(4)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

89. Determine the total annual benzene quantity from stationary source waste by the following procedure:

[40 C.F.R. 61.355(a)]
[18 AAC 50.040(j) & 18 AA 50.326(j)(4)]

89.1 For each waste stream subject to this condition having a flow-weighted annual average water content greater than 10-percent water, on a volume basis as total water, or is mixed with water or other wastes at any time and the resulting mixture has an annual average water content greater than 10-percent as specified in Condition 88, the owner or operator shall:

[40 C.F.R. 61.355(a)(1)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. Determine the annual waste quantity for each waste stream using the procedures specified in Condition 90.

[40 C.F.R. 61.355(a)(1)(i)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

b. Determine the flow-weighted annual average benzene concentration for each waste stream using the procedures specified in Condition 91.

[40 C.F.R. 61.355(a)(1)(ii)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

c. Calculate the annual benzene quantity for each waste stream by multiplying the annual waste quantity of the waste stream times the flow-weighted annual average benzene concentration.

[40 C.F.R. 61.355(a)(1)(iii)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

89.2 Calculate the total annual benzene quantity from stationary source waste by adding together the annual benzene quantity for each waste stream generated during the year and the annual benzene quantity for each process unit turnaround waste annualized according to Condition 90.1.

[40 C.F.R. 61.355(a)(2)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

89.3 Comply with the recordkeeping requirements in Conditions 92 and 93; and

[40 C.F.R. 61.355(a)(4)(i)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

89.4 Repeat the determination of total annual benzene quantity from stationary source waste at least once per year and whenever there is a change in the process generating the waste that could cause the total annual benzene quantity from stationary source waste to increase to 10 Mg/yr (11 ton/yr) or more.

[40 C.F.R. 61.355(a)(4)(ii)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

89.5 Include in the determination of total annual benzene from stationary source waste the benzene quantity in a waste stream that is generated less than one time per year, except as provided for process unit turnaround waste in Condition 90.1, for the year in which the waste is generated unless the waste stream is otherwise excluded from the determination of total annual benzene quantity from stationary source waste in accordance with Conditions 89 through 91.

[40 C.F.R. 61.355(a)(6)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

90. For purposes of the calculation required by Condition 89, determine the annual waste quantity at the point of waste generation, unless otherwise provided in Condition 90.1, by one of the methods given in Conditions 90.2 through 90.4.

[40 C.F.R. 61.355(b)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

90.1 Determine the annual quantity of each process unit turnaround waste generated only at two-year or greater intervals, by either

a. annualizing the waste quantity by dividing the total quantity of waste generated during the most recent process unit turnaround by the time period (in the nearest tenth of a year) between the turnaround resulting in generation of the waste and the most recent preceding process turnaround for the unit. Include the resulting annual waste quantity in the calculation of the annual benzene quantity as provided in Condition 89.1c for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process turnaround; or

b. not annualizing waste quantity, and including the process unit turnaround waste quantity in the calculation of the annual benzene quantity for the year in which the turnaround occurs.

[40 C.F.R. 61.355(b)(4)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

90.2 Select the highest annual quantity of waste managed from historical records representing the most recent five-years of operation or, if the stationary source has been in service for less than five-years but at least one-year, from historical records representing the total operating life of the facility;

[40 C.F.R. 61.355(b)(5)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

90.3 Use the maximum design capacity of the waste management unit; or

[40 C.F.R. 61.355(b)(6)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

90.4 Use measurements that are representative of maximum waste generation rates.

[40 C.F.R. 61.355(b)(7)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

91. For the purposes of the calculation required by Condition 89, determine the flow-weighted annual average benzene concentration according to Condition 91.1 using either of the methods given in Conditions 91.2 and 91.3.

[40 C.F.R. 61.355(c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

91.1 Determine the flow-weighted annual average benzene concentration as follows:

[40 C.F.R. 61.355(c)(1)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. At the point of waste generation, except determine the flow-weighted annual average benzene concentration for process unit turnaround waste using either of the methods given in Conditions 91.2 or 91.3. The resulting flow-weighted annual average benzene concentration for process unit turnaround waste shall be included in the calculation of annual benzene quantity as provided in Condition 89.1c for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process unit turnaround.

[40 C.F.R. 61.355(c)(1)(i) & 61.355(c)(1)(i)(D)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

b. Volatilization of the benzene by exposure to air shall not be used in the determination to reduce the benzene concentration.

[40 C.F.R. 61.355(c)(1)(ii)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

c. Mixing or diluting the waste stream with other wastes or other materials shall not be used in the determination to reduce the benzene concentration.

[40 C.F.R. 61.355(c)(1)(iii)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

d. The determination shall be made prior to any treatment of the waste that removes benzene, except determine the flow-weighted annual average benzene concentration for process unit turnaround waste using either of the methods given in Conditions 91.2 or 91.3. The resulting flow-weighted annual average benzene concentration for process unit turnaround waste shall be included in the calculation of annual benzene quantity as provided in Condition 89.1c for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process unit turnaround.

[40 C.F.R. 61.355(c)(1)(iv)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

e. For wastes with multiple phases, the determination shall provide the weighted-average benzene concentration based on the benzene concentration in each phase of the waste and the relative proportion of the phases.

[40 C.F.R. 61.355(c)(1)(v)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

91.2 *Knowledge of the waste.* Provide sufficient information to document the flow-weighted annual average benzene concentration of each waste stream. Examples of information that could constitute knowledge include material balances, records of chemicals purchases, or previous test results provided the results are still relevant to the current waste stream conditions. If test data are used, then the owner or operator shall provide documentation describing the testing protocol and the means by which sampling variability and analytical variability were accounted for in the determination of the flow-weighted annual average benzene concentration for the waste stream. When the Permittee and the Administrator do not agree on determinations of the flow-weighted annual average benzene concentration based on knowledge of the waste, the procedures under Condition 91.3 shall be used to resolve the disagreement.

[40 C.F.R. 61.355(c)(2)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

91.3 Measure the benzene concentration in the waste stream in accordance with the following procedures:

[40 C.F.R. 61.355(c)(3)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. Collect a minimum of three representative samples from each waste stream. Where feasible, samples shall be taken from an enclosed pipe prior to the waste being exposed to the atmosphere.

[40 C.F.R. 61.355(c)(3)(i)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

b. For waste in enclosed pipes, the following procedures shall be used:

[40 C.F.R. 61.355(c)(3)(ii)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

(i) Collect samples prior to the waste being exposed to the atmosphere in order to minimize the loss of benzene prior to sampling.

[40 C.F.R. 61.355(c)(3)(ii)(A)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

(ii) Install a static mixer in the process line or in a by-pass line unless it is demonstrated that the installation of a static mixer in the line is not necessary to accurately determine the benzene concentration of the waste stream.

[40 C.F.R. 61.355(c)(3)(ii)(B)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

(iii) Locate the sampling tap within two pipe diameters of the static mixer outlet.

[40 C.F.R. 61.355(c)(3)(I(C)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

(iv) Purge sample lines and cooling coil prior to the initiation of sampling with at least four volumes of waste.

[40 C.F.R. 61.355(c)(3)(ii)(D)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

(v) After purging, direct the sample flow to a sample container with the tip of the sampling tube kept below the surface of the waste during sampling.

[40 C.F.R. 61.355(c)(3)(ii)(E)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

(vi) Collect samples at a flow rate such that the cooling coil is able to maintain a waste temperature less than 10° C (50° F).

[40 C.F.R. 61.355(c)(3)(ii)(F)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

(vii) After filling, cap the sample container immediately (within five-seconds) to leave a minimum headspace in the container.

[40 C.F.R. 61.355(c)(3)(ii)(G)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

(viii) Immediately cool the sample containers and maintain a temperature below 10° C (50° F) for transfer to the laboratory.

[40 C.F.R. 61.355(c)(3)(ii)(H)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

c. When sampling from an enclosed pipe is not feasible, collect a minimum of three representative samples in a manner to minimize exposure of the sample to the atmosphere and loss of benzene prior to sampling.

[40 C.F.R. 61.355(c)(3)(iii)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

d. Determining the benzene concentration in a waste stream by analyzing each waste sample using one of the test methods listed in 40 C.F.R. 61.355(c)(3)(iv):

[40 C.F.R. 61.355(c)(3)(iv)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

e. Calculate the flow-weighted annual average benzene concentration by averaging the results of the sample analyses using Equation 26:

[40 C.F.R. 61.355(c)(3)(v)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

Equation 26 $\overline{C} = \frac{1}{Q_t} \times \sum_{i=1}^{n} (Q_i)(C_i)$

Where
C = Flow-weighted annual average benzene concentration for waste stream, ppmw.
Q_t = Total annual waste quantity for waste stream, kg/yr (lb/yr).
n = Number of waste samples (at least 3).
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.

92. In addition to the recordkeeping requirements of Condition 110, maintain records that identify each waste stream subject to Conditions 88 through 91 in a readily accessible location at the site, and indicate whether or not the waste stream is controlled for benzene emissions in accordance with 40 C.F.R. 61, Subpart FF. In addition maintain the following records:

[40 C.F.R. 61.356(a) & (b)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

92.1 For each waste stream not controlled for benzene emission, the records shall include all test results, measurements, calculations, and other documentation used to determined the following information for the waste stream: waste stream identification, water content, whether or not the waste stream is a process wastewater stream, annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration and annual benzene quantity.

[40 C.F.R. 61.356(b)(1)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

92.2 Where the annual waste quantity for process unit turnaround waste is determined in accordance with Condition 90.2, the records shall include all test results, measurements, calculations and other documentation used to determined the following information: identification of each process unit at the facility that undergoes turnarounds, the date of the most recent turnaround for each process unit, identification of each process unit turnaround waste, the water content of each process unit turnaround waste, the annual waste quantity determined in accordance with Condition 90.2, the range of benzene concentrations in the waste, the annual average flow-weighted benzene concentration of the waste and the annual benzene quantity calculated in accordance with Condition 89.1c.

[40 C.F.R. 61.356(b)(5)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

93. Submit to the Administrator by the initial startup for a new source, a report that summarizes the regulatory status of each waste stream subject to Condition 88 and is determined by the procedures specified in Condition 91 to contain benzene. The report shall include the following information:

[40 C.F.R. 61.357(a) & (c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

93.1 Total annual benzene quantity from facility waste determined in accordance with Condition 89.

[40 C.F.R. 61.357(a)(1)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

93.2 A table identifying each waste stream and whether or not the waste stream will be controlled for benzene emissions in accordance with requirements of 40 C.F.R. 61, Subpart FF.

[40 C.F.R. 61.357(a)(2)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

93.3 For each waste stream identified as not being controlled for benzene emissions in accordance with 40 C.F.R. 61, Subpart FF the following information shall be added to the table:

[40 C.F.R. 61.357(a)(3)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

a. Whether or not the water content of the waste stream is greater than 10-percent;

[40 C.F.R. 61.357(a)(3)(i)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

b. Whether or not the waste stream is a process wastewater stream, product tank drawdown or landfill leachate;

[40 C.F.R. 61.357(a)(3)(ii)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

c. The annual waste quantity for the waste stream;

[40 C.F.R. 61.357(a)(3)(iii)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

d. The range of benzene concentrations for the waste stream;

[40 C.F.R. 61.357(a)(3)(iv)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

e. The annual average flow-weighted benzene concentration for the waste stream; and

[40 C.F.R. 61.357(a)(3)(v)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

f. The annual benzene quantity for the waste stream.

[40 C.F.R. 61.357(a)(3)(vi)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

93.4 The information required in Conditions 93.1, 93.2, and 93.3 should represent the waste stream characteristics based on current configuration and operating conditions. The Permittee only needs to list in the report those waste streams that contact materials containing benzene.

[40 C.F.R. 61.357(a)(4)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

93.5 On or before April 7 of each calendar year and whenever there is a change in the process generating the waste stream that could cause the total annual benzene quantity from facility waste to increase to 10 Mg/yr (11 ton/yr) or more, submit to the Administrator and the Department a report that updates the information listed in Conditions 93.1 through 93.3. If the information in the annual report required by Conditions 93.1 through 93.3 is not changed in the following year, a statement to that effect may be submitted.

[40 C.F.R. 61.357(c)]
[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

93.6 Include a copy of the report required by Condition 93 with the facility operating report required by Condition 122.

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

94. Report deviations from Conditions 88 through 93 under Condition 121.

[18 AAC 50.040(j) & 18 AAC 50.326(j)(4)]

Section 6. General Conditions

Standard Terms and Conditions

95. 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)]

96. 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)]

97. 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)]

98. **Administration Fees**. The Permittee shall pay to the Department annual permit administration fees as determined by the Department under 18 AAC 50.403(a)(8).

[18 AAC 50.326(j)(1) & 18 AAC 50.400; and 18 AAC 50.401-.405]
[AS 37.10.052(b), 2000 and AS 46.14.240]

99. **Assessable Emissions.** 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 assessable emission fee rate is set out in 18 AAC 50.410(b). The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of

99.1 the stationa'y source's assessable potential to emit of 1,171 tpy; or

99.2 the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by

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**.**

[18 AAC 50.040(j)(3); 18 AAC 50.326(j)(1); 18 AAC 50.035 and 18 AAC 50.346(b)(1); 18 AAC 50.410; and 18 AAC 50.420]
[40 C.F.R. 71.5(c)(3)(ii)]

99.3 **Assessable Emission Estimates.** Emission fees will be assessed as follows:

99.4 no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Ste 303, PO Box 111800, Juneau, AK 99811-1800; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or

99.5 if no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 99.1.

[18 AAC 50.040(j)(3), 18 AAC 50.326(j)(1), 18 AAC 50.346(b)(1), 18 AAC 50.410, and 18 AAC 50.420]
[40 C.F.R. 71.5(c)(3)(ii)]

100. Good Air Pollution Control Practice. The Permittee shall do the following for EU Groups 1-8, 10 and 11 listed in Section 2

100.1 perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;

100.2 keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and

100.3 keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.030, and 18 AAC 50.326(j)(3) & 50.346(b)(5)]

101. 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)]

102. 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); 18 AAC 50.040(e), and 18 AAC 50.326(j)(3) and 50.346(c)]

102.1 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 102.1 or to address the results of Department inspections that found potential problems; and

(ii) to prevent future dust problems.

102.2 The Permittee shall report according to Condition 104.

103. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, except as authorized by a construction permit, Title V permit, or air quality control permit issued before October 1, 2004.

[18 AAC 50.055(g)]

104. Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110; and 18 AAC 50.040(e), and 18 AAC 50.326(j)(3) and 18 AAC 50. & 50.346(a)]
[40 C.F.R. 71.6(a)(3)]

104.1 **Monitoring, Record Keeping, and Reporting**

a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 121.

b. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 104.

104.2 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 104; or

b. the Department notifies the Permittee that it has found a violation of Condition 104.

104.3 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 104; and

d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

104.4 With each stationary source operating report under Condition 122, the Permittee shall include a brief summary report which must include

a. the number of complaints received;

b. the number of times the Permittee or the Department found corrective action necessary;

c. the number of times action was taken on a complaint within 24 hours; and

d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.

104.5 The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

105. Technology-Based Emission Standard. If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard[19] listed in Condition(s) 15, 16, 36, 61, and, 37-82 the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under Condition 121 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 121.

[18 AAC 50.235(a), and 18 AAC 50.040(j)(4), and 18 AAC 50.326(j)(4)]
[40 C.F.R. 71.6(c)(6)]

Open Burning Requirements

106. Open Burning. The Permittee is allowed to open burn only when conducting fire fighter training with fuels, as allowed by Condition 106.1.

106.1 **Firefighter Training: Fuel Burning**. Unless a greater quantity is approved by the Department, a fire service may open burn up to 250 gallons of uncontaminated fuel daily and up to 600 gallons yearly for firefighter training without ensuring maximum combustion efficiency. To conduct this training without prior written Department approval, the fire service shall

a. provide public notice consistent with Condition 106.2 before burning more than 20 gallons of uncontaminated fuel, unless waived in writing by the Department; and

b. respond to complaints in accordance with Condition 106.3.

106.2 **Public Notice**. A person required to provide public notice of open burning shall issue the notice through local news media or by other appropriate means if the area of the open burning does not have local news media. The public notice must be issued as directed by the Department and must

a. state the name of the person conducting the burn;

b. provide a list of material to be burned;

c. provide a telephone number to contact the person conducting the burn before and during the burn;

d. for a surprise fire drill, state

[19] *Technology-based emission standard* means a best available control technology standard (BACT); a lowest achievable emission rate standard (LAER); a maximum achievable control technology standard established under 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

(i) the address or location of the training; and

(ii) the beginning and ending dates of the period during which a surprise fire drill may be conducted (this period may not exceed 30 days); and

e. for open burning other than a surprise fire drill, state the expected time, date, and location of the open burning.

106.3 **Complaints**. A person required to provide public notice of open burning shall

a. make a reasonable effort to respond to complaints received about the burn;

b. keep, for at least 30 days, a record of all complaints received about the burn, including to the extent feasible

(i) the name, address, and telephone number of each person who complained;

(ii) a short summary of each complaint;

(iii) any action the person conducting the open burning took to respond to each complaint; and

c. upon request, provide the Department with a copy of the records kept under Condition 106.3b.

[18 AAC 50.065; and 18 AAC 50.040(j) and 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(3)]

Section 7. General Source Testing and Monitoring Requirements

107. 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) and 18 AAC 50.345(a) & (k)]

108. Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

[18 AAC 50.220(b)]

108.1 at a point or points that characterize the actual discharge into the ambient air; and

108.2 at the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air.

109. Reference Test Methods. The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

109.1 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) and 18 AAC 50.040(a)]
[40 C.F.R. 60]

109.2 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) and 18 AAC 50.220(c)(1)(B)]
[40 C.F.R. 61]

109.3 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), and 18 AAC 50.220(c)(1)(C)]
[40 C.F.R. 63]

109.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9 and may use the form in Section 12 to record data.

[18 AAC 50.030, and 18 AAC 50.220(c)(1)(D)]

109.5 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) and 18 AAC 50.220(c)(1)(E)]
[40 C.F.R. 60, Appendix A]

109.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.

[18 AAC 50.035(b)(2); and 50.220(c)(1)(F)]
[40 C.F.R. 51, Appendix M]

109.7 Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

[18 AAC 50.040(c)(24) and 50.220(c)(2)]
[40 C.F.R. 63, Appendix A, Method 301]

110. 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 source 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) and 50.990(102)]

111. Test Exemption. The Permittee is not required to comply with Conditions 113, 114 and 115 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 5.1).

[18 AAC 50.345(a)]

112. 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)]

113. Test Plans. Except as provided in Condition 111, 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 source 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 107 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be performed without resubmitting the plan.

[18 AAC 50.345(a) & (m)]

114. Test Notification. Except as provided in Condition 111, 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)]

115. Test Reports. Except as provided in Condition 111, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall additionally certify the results in the manner set out in Condition 118. 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)]

116. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in Conditions 9 and 23, the three-hour average is determined using the average of three one-hour test runs. The source testing must account for those emissions caused by soot blowing, grate cleaning, or other routine maintenance activities by ensuring that at least one test run includes the emissions caused by the routine maintenance activity and is conducted under conditions that lead to representative emissions from that activity. The emissions must be quantified using the following equation:

Equation 27

$$E = E_M \left[(A + B) \times \frac{S}{R \times A} \right] + E_{NM} \left[\frac{(R - S)}{R} - \frac{B \times S}{R \times A} \right]$$

Where

E	=	the total PM emissions of the source in grains per dry standard cubic foot (gr./dscf).
E_M	=	the PM emissions in gr./dscf measured during the test that included the routine maintenance activity.
E_{NM}	=	the arithmetic average of PM emissions in gr./dscf measured during the test runs that did not include the maintenance activity.
A	=	the period of routine maintenance activity occurring during the test run that included routine maintenance activity, expressed to the nearest hundredth of an hour.
B	=	the total period of the test run, less A.
R	=	the maximum period of source operation per 24 hours, expressed to the nearest hundredth of an hour.
S	=	the maximum period of routine maintenance activity per 24 hours, expressed to the nearest hundredth of an hour.

[18 AAC 50.220(f)]

Section 8. General Recordkeeping and Reporting Requirements

Recordkeeping Requirements

117. Recordkeeping Requirements. The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

[18 AAC 50.326(j)]
[40 C.F.R. 60.7(f), Subpart A and 71.6(a)(3)(ii)(B)]

117.1 copies of all reports and certifications submitted pursuant to this section of the permit; and

117.2 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.

g. CEMS data including: all raw data, calculation results, test results and monitoring data.

Reporting Requirements

118. 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/Permit Deviation 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.

118.1 The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if

a. a certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and

b. the person providing the electronic signature has made an agreement, with the certifying authority described in Condition 118.1a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

[18 AAC 50.345(a) & (j); and 18 AAC 50.205 & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)(A)]

119. Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall send an original and a copy of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with Condition 118.

[18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)(A)]

120. 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); and 18 AAC 50.200 & 50.326(a) & (j)]
[40 C.F.R. 71.5(a)(2) & 71.6(a)(3)]

121. Excess Emissions and Permit Deviation Reports.

[18 AAC 50.235(a)(2), 50.240(c), 50.326(j)(3), & 50.346(b)(2) & (3)

121.1 Except as provided in Condition 104, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report

(i) emissions that present a potential threat to human health or safety; and

(ii) excess emissions that the Permittee believes to be unavoidable;

b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or non-routine repair that causes emissions in excess of a technology based emission standard;

c. report all other excess emissions and permit deviations

(i) within 30 days of the end of the month in which the emissions or deviation occurs, except as provided in Conditions 121.1c(ii) and 121.1c(iii);

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 121.1c(i); and

(iii) for failure to monitor, as required in other applicable conditions of this permit.

121.2 When reporting excess emissions or permit deviations, the Permittee must report using either the Department's on-line form, which can be found at http://www.dec.state.ak.us/air/ap/site.htm or https://myalaska.state.ak.us/deca/air/airtoolsweb, or if the Permittee prefers, the form contained in Section 13 of this permit. The Permittee must provide all information called for by the form that is used.

121.3 If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

122. Operating Reports. During the life of this permit, the Permittee shall submit to the Department one original and one copy of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year. The Permittee, at their discretion, may submit one copy in electronic format (PDF or other Department compatible image format).

[18 AAC 50.346(b)(6) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)(A)]

122.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

122.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under Condition 122.1, either

a. The Permittee shall identify

(i) the date of the deviation;

(ii) the equipment involved;

(iii) the permit condition affected;

(iv) a description of the excess emissions or permit deviation; and

(v) any corrective action or preventive measures taken and the date of such actions; or

b. When excess emissions or permit deviations have already been reported under Condition 12127 the Permittee may cite the date or dates of those reports.

122.3 The operating report must include a listing of emissions monitored under Condition 5.1d, 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.

122.4 **Transition from expired to renewed permit.** For the first period of this renewed operating permit, also provide the previous permit's facility operating report elements covering that partial period immediately preceding the effective date of this renewed permit.

123. Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the Department one original and one copy of an annual compliance certification report. The Permittee, at their discretion, may submit one copy in electronic format (PDF or other Department compatible image format).

123.1 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 10, 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.

123.2 **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.

123.3 In addition, submit a copy of the report directly to: U.S. EPA, Region 10, 1200 Sixth Avenue, Suite 900 (AWT-107), Seattle, WA 98101.

[18 AAC 50.205 & 50.326(j); and 50.345(a) & (j)]
[40 C.F.R. 71.6(c)(5)]

Section 9. Permit Changes and Renewal

124. Permit Applications and Submittals. The Permittee shall comply with the following requirements for submitting application information to the EPA Region 10:

[18 AAC 50.326(j)]
[40 C.F.R. 71.7(a)(1)(i)]

124.1 The Permittee shall provide a copy of each application for modification or renewal of this permit, including any compliance plan, or application addenda, at the time the application or addendum is submitted to the Department[20];

124.2 The information shall be submitted to the same address as in Condition 123.3:

124.3 to the extent practicable, the Permittee shall provide to EPA ’pplications in computer readable format compatible with EPA's national database management system. In the interim, until EPA implements such system, portable document format (pdf) or MS Word are acceptable formats; and

124.4 The Permittee shall maintain records as necessary to demonstrate compliance with this condition.

[18 AAC 50.040(j)(4) & 18 AAC 50.326(b)]
[40 C.F.R. 70.10(d)(1)]

125. 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) and 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(8)]

126. 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:

[18 AAC 50.040(j)(4) and 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(12)]

126.1 Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;

126.2 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;

126.3 The change shall not qualify for the shield under 40 C.F.R. 71.6(f);

[20] The documents required in Condition 97.1 are submitted to the Department’s Anchorage office. The current address for the Anchorage office is: ADEC, 619 East Ship Creek, Suite 249, Anchorage, AK 99501.

126.4 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.

127. Operational Flexibility. The Permittee may make changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions):

127.1 The Permittee shall provide EPA and the Department with a notification no less than seven-days in advance of the proposed change.

127.2 For each such change, the written notification required above shall include a brief description of the change within the permitted stationary source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

127.3 The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 127.

[18 AAC 50.040(j)(4) and 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(13)]

128. Permit Renewal. To renew this permit, the Permittee shall submit an application under 18 AAC 50.326 no sooner than [18 months before] and no later than [6 months before the expiration date of this permit]. 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) and 18 AAC 50.326(c)(2) & (j)(2)]
[40 C.F.R. 71.5(a)(1)(iii) and 71.7(b) & (c)(1)(ii)]

Section 10. Compliance Requirements

General Compliance Requirements

129. Compliance with permit terms and conditions is considered to be compliance with those requirements that are

129.1 included and specifically identified in the permit; or

129.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.326(j)(3); and 18 AAC 50.345(a) & (b)]

130. The Permittee must comply with each permit term and condition.

130.1 For applicable requirements with which the stationary source is in compliance, the Permittee shall continue to comply with such requirements.

130.2 Non-compliance with a permit term or condition constitutes a violation of AS 46.14.120(c), 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

a. an enforcement action;

b. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

c. denial of an operating permit renewal application.

[18 AAC 50.040(j), 326(j) & 50.345(a) & (c)]
[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(A)]

131. 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) and 18 AAC 50.345(a) & (d)]

132. 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

132.1 enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;

132.2 have access to and copy any records required by the permit;

132.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

132.4 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)]

Compliance Schedule

133. For applicable requirements with which the North Pole Refinery is in compliance, the Permittee will continue to comply with such requirements.

[18 AAC 50.040(j) & 18 AAC 50.326(j)]
[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(A)]

134. 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) and 18 AAC 50.326(j)]
[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(B)]

Risk Management Plan

135. Review and update the stationary source's Risk Management Plan (RMP)I as follows:

[18 AAC 50.040(j) & 18 AAC 50.326(j)]
[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(A)]
[40 C.F.R. 68.3, 68.190]

135.1 The owner or operator shall review and update the RMP as specified in Condition 135.2 and submit it in the method and format to the central point specified by EPA as of the date of submission.

135.2 The owner or operator of a stationary source shall revise and update the RMP submitted under 40 C.F.R. §68.150 as follows:

a. At least once every five years from the date of its initial submission or most recent update required by Conditions 135.2b through 135.2g of this section, whichever is later. For purposes of determining the date of initial submissions, RMPs submitted before June 21, 1999 are considered to have been submitted on that date.

b. No later than three years after a newly regulated substance is first listed by EPA;

c. No later than the date on which a new regulated substance is first present in an already covered process above a threshold quantity;

d. No later than the date on which a regulated substance is first present above a threshold quantity in a new process;

e. Within six months of a change that requires a revised PHA or hazard review;

f. Within six months of a change that requires a revised offsite consequence analysis as provided in 40 C.F.R. §68.36; and

g. Within six months of a change that alters the Program level that applied to any covered process.

135.3 If a stationary source is no longer subject to 40 C.F.R. Part 68, the owner or operator shall submit a de-registration to EPA within six months indicating that the stationary source is no longer covered.

Section 11. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the stationary source application, this section of the permit contains the requirements determined by the Department not to be applicable to the North Pole Refinery, at the time of permit issuance.

136. Nothing in this permit shall alter or affect the following:

136.1 The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; or

136.2 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)) and (ii)]

137. Table 2 identifies the emission units that are not subject to the specified requirements at the time of permit issuance. If any of the requirements listed in Table 2 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), 10/1/04]
[40 C.F.R. 71.6(f)(1)(ii)]

Table 2 - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for non-applicability
190, 401, 402, 901	40 C.F.R. 60 Subparts Ka	Ka - installation/modification dates
820, 821	40 C.F.R. 60 Subparts K	The installation/modification dates of these tanks are after May 19, 1978 (upper bound applicability date) so Subpart K would never apply to these tanks.
Refinery Fuel tanks No.1 and 2, and tank 70-73	40 C.F.R. 60 Subparts K, Ka, Kb	The capacities of these tanks are less than 75 m^3 (minimum capacity applicability threshold).
303, 304, 822, 823	40 C.F.R. 60 Subparts K, Ka	The installation/modification dates of these tanks are after July 23, 1984 (upper bound applicability date for Ka) so Subpart K or Ka would never apply to these tanks.
5576, 5577, 5758, 525	40 C.F.R. 60 Subparts K, Ka, Kb	The capacities of these tanks are less than 75 m^3 (minimum capacity applicability threshold). The installation/modification dates of these tanks are after July 23, 1984 (upper bound applicability date for Ka) so Subpart K or Ka would never apply to these tanks.
192, 195, 196, 907	40 C.F.R. 60 Subparts Kb	These tanks are considered “process tanks” as defined under 40 C.F.R. 60.111b.

EU ID	Non-Applicable Requirements	Reason for non-applicability
29	40 C.F.R. 63, Subpart ZZZZ	Emergency stationary RICE EU Group 29 does not have to meet the requirements of NESHAP Subparts ZZZZ and Subpart A, including initial notification requirements, per 40 C.F.R. 63.6590(b)(3)(iii). This EUs is considered existing emergency stationary RICE, as defined under 40 C.F.R. 63.6675, with a site rating of more than 500 brake hp located at a major source of HAP emissions that do not operate, or are not contractually obligated to be available, for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).
FHR NP (the refinery)	40 C.F.R. 63 Subpart CC	The stationary source is not major for HAPs, based upon limits requested by the applicant, and the Department's analysis of the stationary source's emissions.

Section 12. Visible Emissions Forms

Visible Emissions Field Data Sheet

Certified Observer: _____

Company & Stationary Source: _____

Location: _____

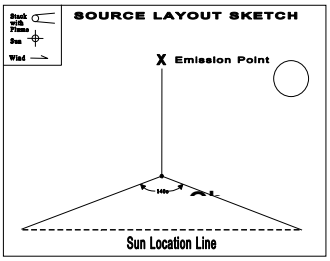
Test No.: _____ Date: _____

Emission Unit: _____

Production Rate/Operating Rate: _____

Unit Operating Hours: _____

Hrs. of observation: _____



Draw

Clock Time	**Initial**				**Final**
Observer location Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description: Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Visible Emissions Observation Record

Page _____ of _____

Company & Stationary Source _____ Certified Observer _____

Test Number Clock Time

Date:		Visibility reduction every 15 Seconds (Opacity)				Steam Plume (check if applicable)		Comments
Hr	Min	0	15	30	45	Attached	Detached	

Additional information:

_____ _____

Observer Signature and Date Certified By and 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 three-minute aggregate opacity limit? (Yes or No) _____
In compliance with six-minute opacity limit? (Yes or No) _____

Average Opacity Summary

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 13. ADEC Notification Form[21]

North Pole Refinery — **Stationary Source (Facility) Name**

AQ0071TVP03 — **Air Quality Permit Number**

Flint Hills Resources Alaska, 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 24hr clock)

End Date: _____ / _____ / _____ Time: _____ : _____ (please use 24hr clock)

What was the duration of the event/deviation?: _____ : _____ (hrs:min) or _____days

(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for Notification: (please check only 1 box and go to the corresponding section)

☐ Excess Emissions - Complete Section 1 and Certify.

☐ Deviation from Permit Condition - Complete Section 2 and Certify

☐ Deviations from COBC, CO, or Settlement Agreement - Complete Section 2 and Certify

Section 1. Excess Emissions

(a) Was the exceedance: ☐ Intermittent or ☐ Continuous

(b) Cause of Event (Check one that applies):

☐ Start Up /Shut Down ☐ Natural Cause (weather/earthquake/flood)

☐ Control Equipment Failure ☐ Scheduled Maintenance/Equipment Adjustment

☐ Bad fuel/coal/gas ☐ Upset Condition ☐ Other _____

(c) Description
Describe briefly, what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emissions Units Involved:
Identify the emission unit involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

Unit ID	Emission Unit Name	Permit Condition Exceeded/Limit/Potential Exceedance

[21] Revised as of August 20, 2008.

(e) Type of Incident (Please Check only one).

☐ Opacity _____ % ☐ Venting _____ (gas/scf) ☐ Control Equipment Down

☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Other:

☐ Marine Vessel Opacity ☐ Flaring

_____

(f) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable? ☐ Yes ☐ No

Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ Yes ☐ No

Certify Report (go to end of form)

Section 2 Permit Deviations

(a) Permit Deviation Type (check one only box, corresponding with the section in the permit).

☐ Source Specific

☐ Failure to monitor/report

☐ General Source Test/Monitoring Requirements

☐ Recordkeeping/Reporting/Compliance Certification

☐ Standard Conditions Not Included in Permit

☐ Generally Applicable Requirements

☐ Reporting/Monitoring for Diesel Engines

☐ Record Keeping Failure

☐ Insignificant Source

☐ Facility Wide

☐ Other Section _____ (title of section and section number of your permit).

(b) Emission Unit Involved.
Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding permit conditions and the deviation.

Unit ID	Emission Unit 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.

(d) Corrective Actions:
Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j)*

To Submit this Report:

1. Fax to: 907-451-2187;

Or

2. Email to: - *if faxed or emailed,*

Or

3. Mail to: ADEC
Air Permits Program
610 University Avenue
Fairbanks, AK 99709-3643

Or

4. Phone Notification: 907-451-5173
Phone notifications require a written follow-up report.

Or

5. Submission of information contained in this report can be made electronically at the following website:
https://myalaska.state.ak.us/deca/air/airtoolsweb/
if submitted online, report must be submitted by an authorized E-Signer for the Stationary Source.

Section 14. Appendices

Appendix A – Alternate Monitoring Plan to Comply With NSPS Dc Monitoring Requirements

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

FEB 0 9 2006

Reply to
Attn Of: AWT-107

Kevin Radke, Plant Manager
North Pole Refinery
Flint Hill Resources Alaska, LLC
1100 H & H Lane
North Pole, Alaska 99705

RECEIVED
FEB 13 2006

Re: North Pole Refinery
New Source Performance Standards Subpart Dc

Dear Mr. Radke:

The United States Environmental Protection Agency (EPA) has reviewed Flint Hill Resources Alaska's (FHR) request dated November 14, 2005, to approve an update to an existing Alternate Monitoring Plan (AMP). This AMP applies to facilities subject to New Source Performance Standards (NSPS) Dc, at FHR's North Pole Refinery. In 1998 FHR increased its crude processing capacity by an additional 80,000 barrels per day, with the addition of Crude Unit 3. This expansion resulted in the replacement of two existing steam generating boilers and one existing glycol heater with two new steam generating boilers and three new glycol heaters. FHR's revised AMP, submitted to the EPA, reflects the change in ownership, includes additional data that has been obtained since the AMP was originally developed, contains clarification on certain requirements, and modification of requirements to make it suitable for current operations.

FHR's two steam generating boilers are identified in their Title V Permit No. AQ0071TVP01, issued by the Alaska Department of Environmental Conservation (ADEC), as being rated at 25 MMBtu/hr. The tag identification on these units is B-401 and B-402. Two of the glycol heaters, tags H-5005 and H-5006 are identified in FHR's Title V permit as being rated as 14.5 MMBTU/hr, while glycol heater H-5010 is rated at 10 MMBtu/hr. According to the ADEC Title V permit issued March 29, 2001, boilers B-401 and B-402 and glycol heaters H-5005, H-5006 and H-5010 are subject to NSPS Subpart Dc. Pursuant to NSPS Subpart Dc, §60.42c(d) "...no owner or operator of an affected facility shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur." Additionally, §60.48c(g) states that owners or operators of each affected facility are required to record and maintain records of the amount of each fuel combusted, during each day.

FHR's steam boilers and glycol heaters are equipped with low NO_x burners that burn light straight run (LSR), which is a very low sulfur fuel. The steam boilers and glycol heaters have used LSR as a fuel since they were installed in 1998, and FHR has used LSR as a fuel in several process heaters since 1994. Naphtha is occasionally used as an alternative fuel for economic or operational reasons. A sampling analysis of LSR used at the refinery from January 2001 through October 2005 shows average sulfur content of 0.0025 weight percent, with a maximum value of 0.0134 weight percent (See Table 1) The average LSR sulfur content since 2001 has been about 0.5% percent the NSPS Subpart Dc standard of 0.5 weight percent. The sampling analysis of naphtha during October, November, and December 2001, shows average sulfur content of 0.0134 which is about 2.68% of the NSPS Subpart Dc standard.

Table 1: LSR Sulfur Content (weight percent)

	2001	2002	2003	2004	2006
January	0.0008%	0.0015%	0.0015%	0.0012%	0.0009%
February	0.0008%	0.0016%	0.0020%	0.0013%	0.0014%
March	0.0037%	0.0014%	0.0016%	0.0016%	0.0011%
April	0.0006%	0.0014%	0.0021%	0.0011%	0.0025%
May	0.0027%	0.0011%	0.0019%	0.0013%	0.0006%
June	0.0027%	0.0015%	0.0031%	0.0013%	0.0009%
July	0.0029%	0.0070%	0.0020%	0.0019%	0.0005%
August	0.0025%	0.0015%	0.0020%	0.0018%	0.0010%
September	0.0024%	0.0055%	0.0010%	0.0025%	0.0008%
October	0.0025%	*0.0134%	0.0021%	0.0014%	0.0014%
November	0.0020%	*0.0134%	0.0019%	0.0012%	
December	0.0033%	*0.0134%	0.0010%	0.0018%	
Yearly Average	**0.0022%**	**0.0052%**	**0.0019%**	**0.0015%**	**0.0011%**

*Note: The data for October through December 2002 is the sulfur content of a single naphtha sample.

On previous occasions, the EPA has approved changes in fuel usage recordkeeping frequency for Subpart Dc boilers that are fired only with natural gas or low sulfur fuel. Therefore, after reviewing the information FHR refinery provided, and the amended AMP along with previous EPA decisions on the matter, Region 10 approves your amended AMP. FHR has provided the EPA with sufficient data (Table 1) to demonstrate that their sulfur content is significantly below the NSPS Subpart Dc standard of 0.5 weight percent. FHR must continue to comply with §60.48c(g) which requires the refinery to maintain records of the amount of fuel combusted daily by each steam boiler and glycol heater. FHR's AMP must specify how the total fuel usage will be apportioned to individual boilers and glycol heaters. The basis for EPA's approval of the AMP is that, although records must be kept to verify the types of fuel combusted, compliance can be adequately verified by keeping fuel usage records on a monthly basis if only natural gas and/or low sulfur fuel is fired. This determination approval does not alter any of the other requirements of NSPS Subparts Dc that may apply to FHR's North Pole Refinery.

If you have any questions regarding this determination, please contact Natasha Greaves at 206-553-7079.

Sincerely,

Madonna Narver Acting for

Jeff KenKnight, Manager
Federal & Delegated Air Programs Unit

pdf cc: James Baumgartner, ADEC
Jack Coutts, ADEC
Rusty Gesin, ADEC
Brian Roos, Flint Hill Refinery, Alaska

Flint Hill Refinery Alternate Monitoring Plan

Frequency:

Flint Hill Refinery (FHR) will collect monthly grab samples from the fuel sources in an as-fired condition and analyze them for sulfur content. If the sulfur content exceeds 0.05 weight percent (10% of the allowable limit), FHR will switch to daily samples until the weight percent is less than 0.05 weight percent, at which time the sampling frequency will revert to monthly sampling.

Test Methods:

The fuel samples will be analyzed for sulfur using any of the following ASTM methods: D129-64, D1552-83, D4057-81, D4294, D5453, D5623, or other method approved by the U.S. Environmental Protection Agency.

Alternative Fuels:

If FHR uses fuels with sulfur content greater than 0.05 weight percent, the standard procedures outlined in Subpart Dc will be followed.

Result:

Results of fuel sulfur testing and fuel use will be reported in the semi-annual Title V operating report, and a copy will be provided to the U.S. Environmental Protection Agency, pursuant to condition 67.2 of the Title V permit, or other condition requiring semi-annual reporting of monitoring if the Title V permit is revised.

Appendix B – Compliance Assurance Monitoring (CAM) Plan

Compliance Assurance Monitoring – Truck and Rail Loading Operations
Vapor Recovery Units for VOC Control
Flint Hills Resources Alaska, LLC – North Pole Refinery

BACKGROUND

Emissions Unit[22]

Description: Truck and Rail Loading Operations
Identification: Source IDs 10 and 11
Facility: North Pole Refinery
1100 H and H Lane
North Pole, Alaska 99705

Applicable Regulations, Emission Limit, and Monitoring Requirements

Regulation:	Owner Requested Limit
Regulated Pollutant:	Volatile Organic Compounds (VOC)
Emission Limit:	Emit no more than 10 milligrams of organic vapors per liter of gasoline loaded.
Regulation:	40 CFR 60.502(b) *(Truck Loading Operation Only)*
Emission Limit:	Emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tanks trucks are not to exceed 35 milligrams of total organic compounds per liter of gasoline loaded.
Monitoring Requirements:	Annual source testing for each VRU.

Control Technology

Vapor Recovery Unit

Monitoring Approach

3. The key elements of tonitoring approach are presented in Table A-1.

[22] The truck and rail loading VRUs are operated in a consistent manner. Therefore, the Compliance Assurance Monitoring (CAM) Plan requirements are identical for each unit. The monitoring strategy identified in this Plan is applicable to both emission units.

TABLE A-1. MONITORING APPROACH

Section 1. Requirement	***Section 2. Parameter***
I. Indicator	The total hydrocarbon concentration in the VRU vents (volume % measured as propane).
Measurement Approach	The total hydrocarbon concentration is monitored with a continuous HC process monitor.
II. Indicator Range	**4.** An excursion for either the truck or rail loading rack VRU is defined as one of the following: a) a one-hour average total hydrocarbon concentration greater than 1.07 volume % as propane, or b) an investigation is triggered if the one-hour average total hydrocarbon concentration is between 0.37% and 1.06% as propane, and the results of the investigation indicate that the VRU exceeded the 10C per liter of gasoline loaded standard.
III. Performance Criteria A. Data Representativeness	The HC process monitoris located at the outlet of the VRUs and is directly measuring the concentration of hydrocarbon exiting the VRUs. The monitored hydrocarbon concentration is an indicator of the VOC emissions exiting each VRU.
B. Verification of Operational Status	Verification of the operational status will be done through an instrument alarm system. If the HC Process Monitor is not operating an alarm will notify operations.
C. QA/QC Practices and Criteria	The accuracy of the HC Process Monitor will be verified through annual source testing and by introducing a known concentration of propane calibration gas to the analyzer once each calendar year..
D. Monitoring Frequency and Data Collection Procedures	The HC Process Monitor alternatively monitors the hydrocarbon concentration at the outlet of one of the two VRUs (except for a 1-2 minute purging period when switching between VRU lines). The HC Process Monitor switches between monitoring the two VRUs every 9 minutes. Data from the HC Process Monitor will be recorded electronically every 15 seconds when loading is occurring. The collected data for each VRU will then be averaged over a one-hour period (excluding data collected during purging events). Note that if the HC Process Monitor unit is down for a period of longer than 12 hours, the hydrocarbon concentration will be manually recorded from the outlet of each VRU twice per day until the HC Process Monitor resumes normal operation.

JUSTIFICATION

I. Background

Flint Hills Resources Alaska, LLC (FHRA) operates a fuels loading operation at the North Pole Refinery. FHRA loads fuels from refinery storage tanks to trucks and rail cars. Vapor emissions generated during those loading operations are routed to two separate vapor recovery units (VRUs). FHRA has selected a total hydrocarbon process monitor to satisfy its CAM, although this is not required because the controlled emissions are not greater than 100 tons. Since this total hydrocarbon process monitor meets the applicable performance criteria and indicator ranges for a CEMS in 40 CFR § 64.3, the total hydrocarbon process monitor is a presumptively acceptable monitoring approach pursuant to 40 CFR § 64.4(b)(2).

II. Rationale for Selection of Performance Indicators

The applicable requirement is defined in terms of milligrams of VOC emitted per liter of gasoline loaded. Monitoring of the total hydrocarbon concentration at the outlet of the VRU provides a direct indication of the level of emissions exiting the VRU. By maintaining the total hydrocarbon concentration within the selected indicator range (i.e., less than 0.37 volume % as propane on a one-hour average as an investigation action level, and less than 1.07 volume % as propane as permit deviation under Condition 45.4), the level of control efficiency that meets the applicable standards described in the North Pole Title V Permit is achieved.

III. Rationale for Selection of Indicator Ranges

The selected indicator range was determined based on guidance provided by John Zink Inc., the hydrocarbon analyzer manufacturer, for estimating VOC emissions from the VRUs. This guidance document is included in Appendix C. Based on the guidance document a total hydrocarbon concentration between 0.37 and 1.07 volume % as propane (one-hour average) was established as the acceptable indicator operating range. If the total hydrocarbon concentration exceeds 0.37 volume % as propane (one-hour average) an alarm will be activated to trigger the facility to investigate the cause and take appropriate action to verify proper operation of the VRU. A hydrocarbon indication in excess of 0.37 volume % as propane suggests the VRU is not functioning optimally, but is not necessarily an indication that the facility has exceeded the 10 mg/l permit limit.

A total hydrocarbon concentration that exceeds 0.37 volume % as propane (one-hour average) will denote a potential excursion event and will trigger an investigation by the refinery. The results of this investigation will determine whether the VRU exceeded the 10 mg/l permit limit. The investigation will include the methodology provided by John Zink in Appendix C and any other credible evidence brought forth during the investigation. If an investigation is triggered as a result of the hydrocarbon concentration exceeding 0.37%, a summary of the results of the investigation shall be submitted the Department in accordance with condition 45.3c and included with the operating report under condition 132. Furthermore, if the results of this investigation indicate that the VRU exceeded the 10 mg VOC per liter of gasoline loaded standard, then an excess emission report shall be submitted to the Department in accordance with condition 131.

A total hydrocarbon concentration greater than 1.07 volume % as propane will denote an excursion event and an excess emission report shall be submitted to the Department in accordance with condition 131.

John Zink recommends that the maximum allowable vent total hydrocarbon concentrations be set no lower than 1.07 vol% measured as propane equivalent, for the emission standard of 10 mg/l . Further it recommends that the allowable vent hydrocarbon emission concentration be averaged over at least a one hour period. This recommendation was based on a series of tests conducted taking into account variables including temperature of inlet vapor (F), pressure of inlet vapor, "mm Hg absolute", repress/purge air factor and vapor growth factor.

Appendix C – CEMS Guidance Document From John Zink Company

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December 6, 1998

Subject: Continuous Emission Monitors For Carbon Adsorption Based Vapor Recovery Systems

Dear Customer:

This is in response to requests for a recommendation as to the proper alarm settings for continuous emission monitors (CEMs) used on carbon adsorption based gasoline vapor recovery systems. Specifically, we have been requested to specify maximum total hydrocarbon concentration values that will assure compliance with regulatory volatile organic compound (VOC) emission standards.

In the United States and in other countries which have adopted the U.S. standards, emission standards for gasoline bulk distribution terminals are expressed as an allowable weight of VOC which can be emitted per unit volume of gasoline loaded. The current U.S. Federal standards are either 10 or 35 milligrams of VOC per liter of gasoline loaded averaged over a 6 hour continuous testing period. While standards expressed in these units of measurement are good ones in that they directly relate VOC emissions to truck rack loading activity, nevertheless, they do require a relatively complex test procedure involving collection of multiple data to determine compliance.

The required test procedure is described in the U.S. Code of Federal Regulations, Title 40, Part 60, Subpart XX. The test procedure requires a determination of the mass of VOCs vented from the VRU during each 5 minute interval over a 6 hour test period. To do this calculation, it is necessary to measure, for each 5 minute interval during the test, the total hydrocarbon concentration of the VRU vent expressed as volume percent, the total actual volume of vented air/hydrocarbon vapor, the vent pressure at the vent volume measuring meter, and the vent temperature at the vent volume measuring meter. This data, with the proper conversion factors, enables the weight of hydrocarbon vapor vented from the VRU during each 5 minute interval to be calculated. The total weight of hydrocarbon vented from the VRU during the 6 hour test period is the sum of the weight of hydrocarbon vented during each 5 minute interval. Compliance with the Federal emission standard is then determined by dividing the sum of the weight of hydrocarbon vented during each 5 minute interval by the total volume of gasoline loaded during the 6 hour test period. Because of the expense and complexity of this type of

testing, U.S. regulatory agencies require compliance testing on only an infrequent basis, with none requiring testing more frequently than once per year.

In an effort to discover a means whereby the operation of the VRU can be relatively easily and continuously monitored to ascertain whether or not it is operating within compliance of the required emission standard, some regulatory agencies have required that a continuous emission monitor be provided with the unit to continuously measure hydrocarbon concentration in the air stream vented from the VRU. These continuous emission monitors are normally non dispersive infrared based analyzers which read total hydrocarbon concentration in volume % expressed as propane or butane equivalents. However, since there is no direct correlation relating vent hydrocarbon concentration to the weight of hydrocarbon vapor emitted from the VRU, this data by itself, can only be used as a guideline. As discussed above, it is necessary to not only know the concentration of hydrocarbon vented from the VRU, it is also required to know the corresponding volume, measured at standard conditions, of the vent stream to determine the weight of hydrocarbon vapor emitted. Without equipment to measure vent stream volume corrected to standard conditions, it is necessary to make several assumptions to correlate hydrocarbon vent stream concentration to the weight of total hydrocarbon vapor vented during the test period.

There are several variables that determine the volume of the vent stream from the VRU. The major variable that influences the volume of air vented from the VRU is the inlet hydrocarbon concentration which typically varies between 10 and 60 volume %. For example, higher inlet hydrocarbon concentrations mean lower air content of the inlet air+vapor stream which results in lower vented air volume from the VRU. Conversely, lower inlet hydrocarbon concentrations result in higher air volume vented from the VRU. The temperature and pressure of the gasoline transport being loaded also affects the standard volume of air vented from the VRU. For example, at higher pressures and lower temperatures, a higher standard volume of air is displaced from the gasoline transport while being loaded than when the transport is being loaded at lower pressures and higher temperatures.. Another variable affecting the volume of air vented from the VRU is determined by the volume of outside air introduced into the VRU during adsorber repressurization and the amount of purge air introduced into the VRU during the carbon bed regeneration process. The air vented from the VRU includes air from not only the inlet vapor stream, but also, this repressurization and purge air as well. The total volume of repressurization and purge air typically is about 15 to 35% of the inlet air+vapor volume. Finally, a variable having an influence on the amount of air vented from the VRU is the vapor growth factor. This factor is expressed as a ratio of the volume of air+hydrocarbon vapor displaced from the transport vehicle divided by the volume of gasoline loaded during the loading operation. Typically, vapor growth factors range from 1.0 to 1.2.

The attached Tables Numbers 1 and 2 lists the allowable vent stream hydrocarbon concentration without exceeding the VOC emission standards using different combinations of those variables discussed above. Table Number 1 provides data for an emission standard of 10 milligrams of VOC per liter of gasoline loaded while Table Number 2 provides data for an emission standard of 35 milligrams per liter. For each emission standard, allowable vent hydrocarbon concentrations were calculated for 9 cases involving varying combinations of operating variables which are likely to be encountered in gasoline bulk distribution terminals. It is obvious from an analysis of this table that for the conditions evaluated, the maximum allowable vent hydrocarbon concentration can vary from approx. 0.4 to 1.1 vol. % for the 10 mg/l standard and from approx. 1.3 to 3.7 vol. % without exceeding the 35 mg/l emission standard.

Based on an analysis of the attached data, it can be concluded that a continuous vent analyzer can be used as a rough guideline to ascertain whether the VRU is operating in compliance with the emission standard, however, it should not be used as an absolute measure to determine compliance because of the influence of several other operating variables. However, if regulatory agencies insist on a requirement that vent analyzer total hydrocarbon concentration values, alone, be used as a means of judging compliance with the emission standards, then it is very important that the maximum allowable hydrocarbon vent concentration be set high enough so as not to impose a more stringent standard than is actually required. It also is important to average the analyzer readings over a sufficient period since the emission standards allow for averaging of results over several hours. **In this event, it is John Zink's recommendation that the maximum allowable vent total hydrocarbon concentrations be set no lower than 1.1 vol. % and 3.7 vol. %, measured as propane equivalent, for the two emission standards of 10 mg/l and 35 mg/l respectively. Further, it is our recommendation that the allowable vent hydrocarbon emission concentration be averaged over at least a one hour period.** In addition, an allowance should be made for the exclusion of methane or ethane should these compounds be detected in the VRU vent stream. Because these compounds are not normally present in gasoline vapor, this is generally not an issue. However, on a few occasions, because of the practice of storing gasoline in tanks blanketed with natural or refinery fuel gas, it can be an issue and the proper allowances must be taken because the recovery of these compounds is not required by the emission standard and is not included as part of John Zink's performance guarantee.

Sincerely,

Harold Dinsmore
Vice President
Vapor Control Systems Group
John Zink Company

Attachments
"ccmsalm1"

Page 3

TABLE NUMBER 1

MAX ALLOWABLE ADAB VRU VENT TOTAL HYDROCARBON CONCENTRATION, VOLUME % AS PROPANE
AT VOC EMISSION STANDARD OF 10 MILLIGRAMS PER LITER OF GASOLINE LOADED

OPERATING VARIABLES	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6	CASE 7	CASE 8	CASE 9
Emission Standard, mg/l	10	10	10	10	10	10	10	10	10
Temp Of Inlet Vapor, Degree F.	100	60	20	100	20	60	60	100	100
Press Cf Inlet Vapor, "HgA	31	31	30	31	29	31	29	31	29
Repress/Purge Air Factor	0.35	0.35	0.15	0.25	0.15	0.15	0.15	0.15	0.15
Vapor Growth Factor	1.2	1.1	1.2	1	1	1	1	1	1

MAX VENT HYDROCARBON CONCENTRATION
VOLUME % AS PROPANE

VRU Inlet Hydrocarbon Concentration Vol%	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6	CASE 7	CASE 8	CASE 9
10	0.370	0.375	0.390	0.482	0.484	0.491	0.524	0.528	0.564
15	0.386	0.391	0.410	0.504	0.508	0.515	0.550	0.554	0.592
20	0.402	0.408	0.431	0.528	0.535	0.542	0.579	0.583	0.623
25	0.421	0.426	0.455	0.554	0.564	0.572	0.611	0.616	0.658
30	0.441	0.446	0.482	0.583	0.597	0.605	0.647	0.652	0.696
35	0.462	0.468	0.512	0.616	0.635	0.643	0.687	0.692	0.739
40	0.487	0.493	0.546	0.652	0.677	0.686	0.733	0.738	0.788
45	0.514	0.520	0.584	0.692	0.725	0.734	0.784	0.790	0.844
50	0.544	0.551	0.629	0.738	0.780	0.790	0.844	0.850	0.909
55	0.577	0.585	0.681	0.790	0.844	0.855	0.914	0.921	0.984
60	0.616	0.624	0.743	0.850	0.920	0.933	0.996	1.004	1.072

Attachment
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TABLE NUMBER 2

MAX ALLOWABLE ADAB VRU VENT TOTAL HYDRCCARBON CONCENTRATION, VOLUME % AS PROPANE AT VOC EMISSION STANDARD OF 35 MILLIGRAMS PER LITER OF GASOLINE LOADED

OPERATING VARIABLES	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6	CASE 7	CASE 8	CASE 9
Emission Standard, mg/l	35	35	35	35	35	35	35	35	35
Temp Of Inlet Vapor, Degree F.	100	60	20	100	20	60	60	100	100
Press Of Inlet Vapor, "HgA	31	31	30	31	29	31	29	31	29
Repress/Purge Air Factor	0.35	0.35	0.15	0.25	0.15	0.15	0.15	0.15	0.15
Vapor Growth Factor	1.2	1.1	1.2	1	1	1	1	1	1

MAX VENT HYDROCARBON CONCENTRATION VOLUME % AS PROPANE

VRU Inlet Hydrocarbon Concentration Vol%	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5	CASE 6	CASE 7	CASE 8	CASE 9
10	1.284	1.301	1.353	1.669	1.674	1.696	1.811	1.825	1.948
15	1.337	1.354	1.420	1.743	1.757	1.780	1.900	1.914	2.043
20	1.394	1.412	1.494	1.825	1.847	1.872	1.998	2.013	2.149
25	1.457	1.475	1.575	1.914	1.948	1.974	2.107	2.122	2.265
30	1.525	1.545	1.666	2.013	2.060	2.087	2.228	2.244	2.395
35	1.600	1.621	1.769	2.122	2.186	2.215	2.364	2.381	2.541
40	1.683	1.704	1.884	2.244	2.329	2.359	2.518	2.536	2.706
45	1.775	1.797	2.016	2.381	2.491	2.523	2.693	2.712	2.894
50	1.877	1.901	2.168	2.536	2.677	2.712	2.894	2.915	3.109
55	1.992	2.018	2.344	2.712	2.894	2.932	3.127	3.150	3.360
60	2.122	2.149	2.552	2.915	3.149	3.190	3.402	3.426	3.654

Attachment
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Sample Calculation
Correlating Allowable VRU Vent Hydrocarbon Concentration
Not To Exceed VOC Emission Standard Of 10 Milligrams Per Liter Of Product Loaded

Case Number 4, Table Number 1 @ 40% Inlet Hydrocarbon Vapor Contentration:

VOC Emission Standard:	10 milligrams of VOC per liter of product loaded.
Operating Conditions:	
Temp. of inlet vapor:	100 °F = 560 °R
Pressure of inlet vapor:	31 "HgA
Inlet vapor hydrocarbon conc:	40 vol% actual concentration
Repressurization/Purge Air Factor:	0.25
Vapor Growth Factor:	1.0

Calculations:

Basis: 1000 gallon of liquid gasoline loaded.

Gasoline Loaded:
= 1000 gallons (3.785 liters / gallon) = 3785 liters

Standard vapor flow volume to VRU from truck rack:
= (1000 gallons) (1 cubic foot / 7.48 gallons) (520°R / 560°R) (31 "HgA / 29.92 "HgA) (1.0) = 128.62 standard cubic feet

Air to VRU from truck rack:
= (128.62 scf) (1-0.4) = 77.17 scf

Air in VRU vent = Air from truck rack + (repressurization air and purge air)
= 77.17 scf + (repressurization and purge air factor) (128.62)
= 77.17 + (0.25) (128.62) = 109.32 scf

Maximum allowable hydrocarbon vapor emissions from VRU:
= (10 milligrams / liter) (3785 liters)
= 37850 milligrams of hydrocarbon vapor

= (37850 mg) (1 pound / 453592 mg) (1 lb. mole / 44.1 lb.) (379 scf/ lb. mole)
= 0.717 scf of hydrocarbon vapor measured as propane equivalent

Maximum allowable VRU vent concentration of hydrocarbon vapor:
= [scf of hydrocarbon / (scf of hydrocarbon + scf of air)] (100)
= [0.717 / (0.717 + 109.32)] (100)
= **0.652 vol. % as propane equivalent**

Attachment
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