DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY OPERATING PERMIT

Permit No. AQ0098TVP03 Issue Date: Public Comment - July 30, 2015

Expiration Date: Five Years

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Alyeska Pipeline Service Company**, for the operation of **Trans Alaska Pipeline System (TAPS) Pump Station 5 (PS-5)**.

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 April 17, 2015 Register 214. 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 AQ0098TVP02, including all revisions, 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
ADEC .....Alaska Department of Environmental Conservation
AS .....Alaska Statutes
ASTM .....American Society for Testing and Materials
BACT .....Best Available Control Technology
bbls .....barrels
BHp .....Boiler Horsepower
C.F.R. .....Code of Federal Regulations
The Act .....Clean Air Act
CO .....Carbon Monoxide
dscf .....Dry standard cubic foot
EPA .....US Environmental Protection Agency
EU.....Emission Unit
gr./dscf .....grain per dry standard cubic foot (1 pound = 7000 grains)
GPH .....gallons per hour
HAPs .....Hazardous Air Pollutants [HAPs as defined in AS 46.14.990]
hp .....Horsepower
ID.....Emission Unit Identification Number
kPa .....kiloPascals
LAER.....Lowest Achievable Emission Rate
MACT .....Maximum Achievable Control Technology [MACT as defined in 40 C.F.R. 63]
MMBtu/hr.....Million British thermal units per hour
MMscf .....Million standard cubic feet
MR&R .....Monitoring, Recordkeeping, and Reporting
NA .....Not applicable
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]
NO_X .....Nitrogen Oxides
NSPS .....Federal New Source Performance Standards [NSPS as contained in 40 C.F.R. 60]
O & M .....Operation and Maintenance
O_2 .....Oxygen
PAL .....Plantwide Applicability Limitation
PM-10 .....Particulate matter less than or equal to a nominal 10 microns in diameter
PM-2.5.....Particulate matter less than or equal to a nominal 2.5 microns in diameter
ppm .....Parts per million
ppmv, ppmvd .....Parts per million by volume on a dry basis
psia .....Pounds per Square Inch (absolute)
PSD .....Prevention of Significant Deterioration
PTE .....Potential to Emit
SIC. .....Standard Industrial Classification
SO_2 .....Sulfur dioxide
TAPS.....Trans Alaska Pipeline System
TOC.....total organic compounds
TPH .....Tons per hour
TPY .....Tons per year
VOC .....volatile organic compound [VOC as defined in 40 C.F.R. 51.100(s)]
VOL .....volatile organic liquid [VOL as defined in 40 C.F.R. 60.111b, Subpart Kb]
vol% .....volume percent
wt% .....weight percent

Section 1. Stationary Source Information

Identification

Permittee:		**Alyeska Pipeline Service Company** P.O Box 196660 Anchorage, AK 99519-6660
Stationary Source Name:		**Trans Alaska Pipeline System (TAPS) Pump Station 5 (PS-5)**
Location:		66º 48´ 47" North; 150º 39´ 43" West
Physical Address:		West Sections 18 and 19, T23N, R14W Fairbanks Meridian
Owners		BP Pipelines (Alaska) Inc. ExxonMobil Pipeline Company ConocoPhillips Transportation (Alaska) Inc. Unocal Pipeline Company Koch Alaska Pipeline Company, LLC
Operator		Alyeska Pipeline Service Company
Permittee's Responsible Official:		John Baldridge, Senior Director Pipeline Operations Alyeska Pipeline Service Company 2615 Bidwill Ave., MS 830 Fairbanks, AK 99706
Designated Agent:		CT Corporation System 9360 Glacier Highway, Suite 202 Juneau, AK 99801
Stationary Source and Building Contact:		PS-5 Operations and Maintenance Supervisor Alyeska Pipeline Service Company (907) 787-4502
Fee Contact:		Susan Marvin, Environmental Program Specialist Alyeska Pipeline Service Company P.O Box 196660 Anchorage, AK 99519-6660 (907) 787-8906 susan.marvin@alyeska-pipeline.com
Permit Contact:		Don Mark Anthony, Air Quality SME Alyeska Pipeline Service Company P.O Box 196660 Anchorage, AK 99519-6660 (907) 787-8568 don.markanthony@alyeska-pipeline.com
Process Description:	SIC Code	4612 - Crude Oil Pipelines
	NAICS Code:	4861 - Pipeline Transportation of Crude Oil

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

Section 2. Emission Unit Inventory and Description

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

Table A - Emission Unit Inventory

EU ID	Tag Number	Emission Unit Description	Fuel Type	Rating/Size	Installation or Construction Date
1	35-G-4AT	Solar Turbine Electric Generator PK Model #GSE-1000	Diesel	12.6 MMBtu/hr	Pre-1977
2	35-P-AT	Solar Turbine Injection Pump PK Model #MDG-1200	Diesel	1,100 hp	Pre-1977/1983
3	35-P-3BT	Solar Turbine Injection Pump PK Model #MDG-1200	Diesel	1,100 hp	Pre-1977/1983
4	35-G-1AT	Garret Turbine Generator Model #831-800	Diesel	510 kW	Pre-1977
5	35-G-1BT	Garret Turbine Generator Model #831-800	Diesel	510 kW	Pre-1977
6	35-G-2AT	Garret Turbine Generator Model #831-800	Diesel	510 kW	Pre-1977
7	35-H-1A	Eclipse Therminol Heater 1000-5 HCLT Design	Diesel	20.6 MMBtu/hr	Pre-1977
8	35-H-1B	Eclipse Therminol Heater 1000-5 HCLT Design	Diesel	20.6 MMBtu/hr	Pre-1977
9	N/A	Burnham PF-512 Boiler	Diesel	2.373 MMBtu/hr	Pre-1977
10	N/A	Burnham PF 512 Boiler	Diesel	2.373 MMBtu/hr	Pre-1977
11	35-IN-1	Therm-Tec Solid Waste Incinerator Model #HU-300	Waste	300 lb/hr	Pre-1977
20	TK-150	Breakout Tank 150	N/A	150,000 bbl	Pre-1977
21	35-FP-1	Cummins Firewater Pump Engine	Diesel	170 hp	Pre-1977

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

Section 3. State Requirements

Visible Emissions Standards

1. Industrial Process and Fuel-Burning Equipment Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU IDs 1 through 10 and 21 listed in Table A to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

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

1.1. For EU IDs 1 and 3 through 8, monitor, record and report in accordance with Conditions 3 through 5.

1.2. For EU IDs 2, 9, 10, and 21, if actual emissions remain below the thresholds in 18 AAC 50.326(e), monitoring shall consist of an annual compliance certification in accordance with Condition 14.4.a. Otherwise, monitor, record, and report in accordance with Conditions 3 through 5 for the duration of the permit term.

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

2. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, through the exhaust of EU ID 11, to reduce visibility by more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.040(j) & 50.050(a), 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

2.1. The Permittee shall observe EU ID 11 emissions for 18 consecutive minutes to obtain a minimum of 72 observations in accordance with Method 9 of 40 C.F.R. 60, Appendix A, at least once every 12 calendar months EU ID 11 operates.

2.2. Record and report in accordance with Conditions 4.1.a through 5.2.a; and

2.3. If any monitoring under Condition 2.1 was not performed, report under Condition 59 within three days of the date the monitoring was required.

Visible Emissions Monitoring, Recordkeeping and Reporting

Liquid Fuel-Fired Emission Units (EU IDs 1 through 10 and 21)

3. Visible Emissions Monitoring. When required by any of Conditions 1.1 and 1.2, or in the event of replacement during the permit term, the Permittee shall observe the exhaust of EU IDs 1 through 10 and 21 for visible emissions using either the Method 9 Plan under Condition 3.1 or the Smoke/No-Smoke Plan under Condition 3.2. The Permittee may change visible-emissions plans for an emission unit at any time unless prohibited from doing so by Condition 3.3. 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), 50.326(j), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(i)]

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

a. **First Method 9 Observation**.

(i) Except as provided in Condition 3, for EU IDs 1 and 3 through 8, observe exhaust for 18 minutes within six months after the issue date of this permit.

(ii) For any unit, observe exhaust for 18 minutes within 14 calendar days after changing from the Smoke/No-Smoke Plan of Condition 3.2.

(iii) For any of EU IDs 1 and 3 through 8 that is replaced during the term of this permit and any of EU IDs 2, 9, 10, and 21 that has exceeded any threshold in Condition 1.2 that is replaced during the term of this permit, observe exhaust for 18 minutes within 30 days of startup.

(iv) For each existing emission unit that initially exceeds any threshold in Condition 1.2, observe the exhaust for 18 minutes of operations within 30 days after the calendar month during which that threshold has been exceeded, or within 30 days of the unit's next scheduled operations, whichever is later.

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

c. **Semiannual Method 9 Observations**. After observing emissions for three consecutive operating months under Condition 3.1.b, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, perform 18-minute observations:

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

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

d. **Annual Method 9 Observations**. After at least two semiannual 18-minute observations, unless a six-minute average is greater than 15 percent and one or more individual observations are greater than 20 percent, perform 18-minute observations:

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

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

e. **Increased Method 9 Frequency**. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that emission unit to at least monthly intervals as described in Condition 3.1.b, until the criteria in Condition 3.1.c for semiannual monitoring are met.

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

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

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

c. **Smoke Observed**. If smoke is observed, either begin the Method 9 Plan of Condition 3.1 or perform the corrective action required under Condition 3.3

3.3. **Corrective Actions Based on Smoke/No Smoke Observations**. If visible emissions are present in the exhaust during an observation performed under the Smoke/No Smoke Plan of Condition 3.2, then the Permittee shall either follow the Method 9 Plan of Condition 3.1 or

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

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

c. after completing the actions required under Condition 3.3.a,

(i) take smoke/no smoke observations in accordance with Condition 3.2.

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

(B) continue as described in Condition 3.2.b; or

(ii) if the actions taken under Condition 3.3.a do not eliminate the smoke, or if subsequent smoke is observed under the schedule of Condition 3.3.c(i)(A), then observe the exhaust using the Method 9 Plan unless the Department gives written approval to resume observations under the Smoke/No Smoke Plan; after observing smoke and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke Plan under Condition 3.2.a.

4. Visible Emissions Recordkeeping. When required by any of Conditions 1.1 and 1.2, or in the event of replacement of any of EU IDs 1 through 10 and 21 during the permit term, the Permittee shall keep records as follows:

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

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

a. the observer shall record

(i) the name of the stationary source, emission unit and location, emission unit type, observer's name and affiliation, and the date on the Visible Emissions Observation Form in Section 12;

(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 or best estimate if unknown) on the sheet at the time opacity observations are initiated and completed;

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

(iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emission Observation Form in Section 12, and

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

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

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

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

a. the date and time of the observation;

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

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

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

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

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

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

5. Visible Emissions Reporting. When required by any of Conditions 1.1 and 1.2, or in the event of replacement of any of EU IDs 1 through 10 and 21 during the permit term, the Permittee shall report visible emissions as follows:

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

5.1. Include in each operating report under Condition 63 for the period covered by the report:

a. which visible-emissions plan of Condition 3 was used for each emission unit; if more than one plan was used, give the time periods covered by each plan;

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

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

(ii) a summary to include:

(A) number of days observations were made;

(B) highest six-minute average observed; and

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

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

d. a summary of any monitoring or recordkeeping required under Conditions 3 and 4 that was not done;

5.2. Report under Condition 62:

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 3 was not performed when required, report within three days of the date the monitoring was required.

Particulate Matter Emissions Standards

6. Industrial Process and Fuel-Burning Equipment Particulate Matter. The Permittee shall not cause or allow particulate matter emitted from EU IDs 1 through 10 and 21 listed in Table A to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

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

6.1. For EU IDs 1 and 3 through 6, monitor, record and report in accordance with Conditions 7 and 8.

6.2. For EU IDs 7 and 8, monitor, record and report in accordance with Conditions 9 through 11.

6.3. For EU IDs 2, 9, 10, and 21, if actual emissions remain below the thresholds in 18 AAC 50.326(e), monitoring shall consist of an annual compliance certification in accordance with Condition 14.4.a. Otherwise, monitor, record, and report in accordance with Conditions 7 and 8 for the duration of the permit term.

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

PM Monitoring, Recordkeeping and Reporting

Liquid Fuel-Fired Engines (EU IDs 1 through 6 and 21)

7. Particulate Matter Monitoring for Diesel Engines and Liquid-Fired Turbines. The Permittee shall conduct source tests on EU IDs 1 and 3 through 6, and EU ID 2 and 21 as required by Condition 6.3, to determine the concentration of particulate matter (PM) in the exhaust of an emission unit in accordance with this Condition 7.

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

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

a. conduct a PM source test according to requirements set out in Section 6; or

b. make repairs so that emissions no longer exceed the criteria of Condition 7.2; to show that emissions are below those criteria, observe emissions as described in Condition 3.1 under load conditions comparable to those when the criteria were exceeded.

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

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

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

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

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

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

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

8.1. Report under Condition 62:

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

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

8.2. Report observations in excess of the threshold of Condition 7.2.b within 30 days of the end of the month in which the observations occur;

8.3. In each operating report under Condition 63, include for the period covered by the report:

a. the dates, EU ID(s), and results when an observed 18-minute average was greater than an applicable threshold in Condition 7.2;

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

c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of Condition 7.2, if they were not already submitted.

Liquid Fuel-Fired Heaters (EU IDs 7 through 10)

9. Particulate Matter Monitoring for Liquid Fuel-Fired Heaters. The Permittee shall conduct source tests on EU IDs 7 and 8, and EU IDs 9 and 10 as required by Condition 6.3, to determine the concentration of PM in the exhaust of EU IDs 5 and 6 as follows:

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

9.1. Except as allowed under Condition 9.3, conduct a PM source test according to the requirements set out in Section 6 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.

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

9.3. The PM source test requirement in Condition 9.1 is waived for an emission unit if:

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

b. take corrective action and conduct two 18-minute visible emissions observations in a consecutive six-month period to show that the excess visible emissions described in Condition 9.1 no longer occur.

10. Particulate Matter Recordkeeping for Liquid Fuel-Fired Heaters. The Permittee shall keep records of the results of any PM testing and visible emissions observations conducted under Condition 9.

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

11. Particulate Matter Reporting for Liquid Fuel-Fired Heaters. The Permittee shall report as follows:

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

11.1. In each operating report required by Condition 63, include for the 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 9.1.

b. a summary of the results of any PM testing and visible emissions observations conducted under Condition 9.

11.2. Report as excess emissions, in accordance with Condition 62, any time the results of a source test for PM exceeds the PM emission limit stated in Condition 6.

Sulfur Compound Emission Standards Requirements

12. Sulfur Compound Emissions. In accordance with 18 AAC 50.055(c), the Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from EU IDs 1 through 10 and 21 to exceed 500 ppm averaged over three hours.

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

For Fuel Oil[1](EU IDs 1 through 10 and 21)

12.1. The Permittee shall limit the fuel sulfur content to no more than 0.15 percent by weight at PS-5.

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

12.2. The Permittee shall do one of the following for each shipment of fuel:

a. If the fuel grade requires a sulfur content less than that specified in Condition 12.1, keep receipts that specify fuel grade and amount; or

b. If the fuel grade does not require a sulfur content less than that specified in Condition 12.1, keep receipts that specify fuel grade and amount and

(i) test the fuel for sulfur content; or

(ii) obtain test results showing the sulfur content of the fuel from the supplier or refinery; the test results must include a statement signed by the supplier or refinery of what fuel they represent.

12.3. Fuel testing under Condition 12.2 must follow an appropriate method listed in 18 AAC 50.035(b)-(c) or 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).

12.4. The Permittee shall report as follows:

a. Report in accordance with Condition 62 any time the limit in Condition 12.1 is exceeded.

b. The Permittee shall include copies of all records obtained under Condition 12.2 in the operating report required by Condition 63.

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 C.F.R. 71.6(a)(3) & 71.6(c)(6)]

Pre-construction Permit[2] Requirements

Owner Requested Limits (ORLs)

13. Limits to Avoid HAP-Major Classification at Pump Station 5. The Permittee shall limit the hazardous air pollutant (HAP) emissions from EU ID 20 to no more than 8.1 tons per 12-month rolling period for any individual HAP and 18.5 tons per 12-month rolling period for the aggregate total of HAPs.

[Condition 1, Construction Permit 098CP01, 3/9/2005]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

[1] *Oil* means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil, as defined in 40 C.F.R. 60.41b, effective 7/1/07.

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

13.1. **Monitoring and Recordkeeping.** The Permittee shall monitor compliance with Condition 13 as follows:

[Condition 2, Construction Permit 098CP01, 3/9/2005]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i) & (ii)]

a. Sample the Pump Station 1 discharge crude stream once every twelve calendar months.

b. Determine the amounts of 1,3 butadiene, N-hexane, benzene, 2,2,4 trimethylpentane, toluene, ethyl benzene, xylenes, isopropyl benzene, and naphthalene. The Permittee shall use ASTM method D-5134M.

c. Monitor and record tank level changes at least once per hour. Monitor the total volume of crude oil routed to EU ID 20 using tank level change indicators. Calculate the monthly total volume of crude oil routed to EU ID 20.

d. For any period during which crude oil flow data is unavailable under Condition 13.1.c, the Permittee shall estimate the flow rate of crude oil to EU ID 20 using a crude oil flow rate of 2,350,000 barrels per year (bbl/yr), prorated over the time period during which no data is available.

e. Calculate and record the 12-month rolling total HAP emissions from EU ID 20 on a monthly basis from the most recent crude composition analysis in Condition 13.1.b and using the volume of crude oil routed to EU ID 20 for the month determined from Condition 13.1.c or 13.1.d.

[Conditions 2.1 through 2.5, Construction Permit 098CP01, 3/9/2005]

(i) Calculations shall be based on the methodology presented in the Permittee's October 14, 2003 permit application as described in Section 11. The Permittee may do the calculations semi-annually at the time the operating reports are due.

(ii) If calculated HAP emissions exceed 50% of the limits under Condition 13, calculate and record the 12-month rolling total HAP emissions on a monthly basis.

(iii) Once the HAP emissions fall below 50% of the limits under Condition 13, the Permittee may calculate according to Condition 13.1.e.

[Conditions 2.5a through 2.5c, Construction Permit 098CP01, 3/9/2005]

f. If the calculated HAP emissions under Condition 13.1.e exceed 90% of either of the limits in Condition 13,

[Condition 2.6, Construction Permit 098CP01, 3/9/2005]

(i) Within 4 months of discovery, initiate and complete a validation demonstration of Condition 13.1.e methodology by comparing HAP emissions derived using Gas Producers Association Method 2286 on EU ID 20 headspace along with sampling of Pump Station 1 crude discharge stream;

(ii) The EU ID 20 headspace sampling shall consist of four samples. The samples are to be taken consecutively and, if possible taken all on the same day; and

(iii) The Pump Station 1 crude discharge crude oil sampling shall consist of at least two samples and be carried out within 15 days of the headspace analysis;

(iv) Using the average results of the sampling conducted under Conditions 13.1.f(ii) and 13.1.f(iii), the Permittee shall compare the calculated HAP emissions using crude oil discharge analysis to those using the in-tank headspace analysis carried out concurrently. If the results show that the crude oil analysis methodology is:

[Conditions 2.6a through 2.6d, Construction Permit 098CP01, 3/9/2005]

(A) More conservative than the headspace sampling, continue to calculate the HAP emissions according to Conditions 13.1.a and 13.1.e;

(B) Less conservative than the headspace sampling, sample at quarterly intervals and calculate HAP emissions quarterly according to Condition 13.1.e and multiply all results by the ratio between test results from Conditions 13.1.f(ii) and 13.1.f(iii). When HAP emissions fall below 90% of the limits under Condition 13, the Permittee may continue to monitor at 12 month intervals according to Conditions 13.1.a and 13.1.e. The Permittee should continue to multiply the results by the ratio between test results from Conditions 13.1.f(ii) and 13.1.f(iii).

[Conditions 2.6d(i) & 2.6d(ii), Construction Permit 098CP01, 3/9/2005]

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

[Condition 3, Construction Permit 098CP01, 3/9/2005]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)]

a. Report under Condition 63, the following information:

[Condition 3.1, Construction Permit 098CP01, 3/9/2005]

(i) the results of any crude oil sample analysis obtained during the reporting period as set out by Conditions 13.1.b and 13.1.f; and

(ii) the completed calculation spreadsheets showing the 12-month rolling total HAP emissions for each pollutant and the 12-month rolling aggregate total HAP emissions as calculated under Conditions 13.1.e and 13.1.f.

[Conditions 3.1a & 3.1b, Construction Permit 098CP01, 3/9/2005]

b. Report under Condition 62 if:

[Condition 3.2, Construction Permit 098CP01, 3/9/2005]

(i) the 12-month rolling total individual HAP emissions from EU ID 20 exceeds the limit in Condition 13.

(ii) the 12-month rolling total aggregate HAP emissions from EU ID 20 exceeds the limit in Condition 13; or

(iii) monitoring, recordkeeping, or reporting is not in accordance with Conditions 13.1 and 13.2.

[Condition 3.2a through 3.2c, Construction Permit 098CP01, 3/9/2005]

Insignificant Emission Units

14. For emission units at the stationary source that are insignificant as defined in 18 AAC 50.326(d)-(i) that are not listed in this permit, the following apply:

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

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

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

[18 AAC 50.055(b)(1)]

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

[18 AAC 50.055(c)]

14.4. General MR&R for Insignificant Emission Units

a. The Permittee shall submit the certification of compliance of Condition 64 based on reasonable inquiry;

b. The Permittee shall comply with the requirements of Condition 45;

c. The Permittee shall report in the operating report required by Condition 63 if an emission unit is insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and actual emissions become greater than any of those thresholds; and

d. No other monitoring, recordkeeping or reporting is required.

[18 AAC 50.346(b)(4)]

Section 4. Federal Requirements

40 C.F.R. 62 Subpart HHH and III Federal Exemption Requirements

15. EU ID 11 Medical Waste Limit. The Permittee shall not allow the total quantity (pounds) of medical/infectious wastes to exceed 10 percent of the total waste (pounds) incinerated on a calendar quarter basis.

[18 AAC 50.040(g)(3), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 62.14400(b)(2) & 62.14490, Subpart IIII]

15.1. The Permittee shall weigh medical/infectious wastes and all other wastes burned in EU ID 11 and keep records, on a calendar quarter basis, of the weight of medical/infectious wastes burned and the weight of other non-medical/infectious wastes burned. The Permittee shall calculate the calendar quarter percent weight of medical/infectious wastes burned for each quarter to demonstrate compliance with Condition 15.

a. The Permittee shall submit the records in Condition 15.1 to the EPA or Department upon request.

[40 C.F.R. 62.14400(b)(2) & (c), Subpart IIII]

15.2. The Permittee shall report, under Condition 62, if the weight of medical/infectious waste incinerated exceeds the 10 percent exemption threshold of Condition 15 for a given calendar quarter.

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

16. EU ID 11 Commercial and Industrial Solid Waste Limit. The Permittee shall ensure that the total weight (pounds) of municipal solid waste or refuse-derived fuel, as defined in 40 C.F.R. part 60 Subpart Ea, Subpart Eb, Subpart AAAA, and Subpart BBBB, is greater than 30 percent of the total weight of waste (pounds) incinerated on a calendar quarter basis.

[18 AAC 50.040(g)(4), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 62.14525, Subpart IIII]

16.1. The Permittee shall weigh municipal solid waste, any refuse-derived fuel, and all other wastes burned in EU ID 11 and keep records, on a calendar quarter basis, of the weight of municipal solid waste and refuse-derived fuel burned and the weight of all other fuels and wastes burned in EU ID 11. The Permittee shall calculate the calendar quarter percent weight of municipal solid waste and refuse-derived fuel burned for each quarter to demonstrate compliance with Condition 16.

a. The Permittee shall submit the records in Condition 16.1 to the EPA or Department upon request.

[40 C.F.R. 62.14525(c)(2) & 62.14531, Subpart IIII]

16.2. The Permittee shall report, under Condition 62, if the weight of municipal solid waste and refuse-derived fuel is less than the exemption threshold of Condition 16 for a given calendar quarter.

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

Emission Units Subject to Federal NSPS Subpart A

17. NSPS Subpart A Notification. For any affected facility[3] or existing facility[4] regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Department and EPA written or electronic notification of:

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

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

a. information describing the precise nature of the change,

b. present and proposed emission control systems,

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

d. the expected completion date of the change;

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

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

[40 C.F.R. 60.15(d), Subpart A]

a. the name and address of owner or operator,

b. the location of the existing facility,

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

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

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

[3] 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

[4] *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.

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.

18. 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 IDs 2 and 3 (when equipped with Solar turbine engines with serial nos. 0756S21 or 0753S21, per Condition 25), any malfunctions of associated air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU IDs 2 and 3 is inoperative.

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

19. NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report. For EU IDs 2 and 3 (when equipped with Solar turbine engines with serial nos. 0756S21 or 0753S21), the Permittee shall submit to the Department and to EPA an excess emissions and monitoring systems performance report (EEMSP)[5] (excess emissions are defined in applicable subparts and limits are in Condition 27) and-or summary report form (see Condition 20). The Permittee shall submit the report(s) to the EPA and Department semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the EPA, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:

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

19.1. 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]

19.2. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of EU IDs 2 and 3; the nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted.

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

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

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

[5] The federal EEMSP report is not the same as the state excess emission report required by Condition 62.

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

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

20. NSPS Subpart A Summary Report Form. The Permittee shall submit to the Department and to EPA one "summary report form" in the format shown in Figure 1 of 40 C.F.R. 60.7 (see Attachment A) for each pollutant monitored for EU IDs 2 and 3 (when equipped with Solar turbine engines with serial nos. 0756S21 or 0753S21). The report shall be submitted semiannually, postmarked by the 30th day following the end of each 6-month period, except when more frequent reporting is specifically required by an applicable subpart, case-by-case basis, or the EPA, as follows:

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

20.1. If the total duration of excess emissions for the reporting period is less than one percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than five percent of the total operating time for the reporting period, submit a summary report form unless the EEMSP report described in Condition 19 is requested, or

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

20.2. If the total duration of excess emissions for the reporting period is one percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is five percent or greater of the total time for the reporting period, then submit a summary report form and the EEMSP described in Condition 19.

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

21. NSPS Subpart A Performance (Source) Tests. The Permittee shall conduct source tests according to Section 6 at such times as may be required by EPA and shall provide the Department and EPA with a written report of the results of the source test. The Permittee shall:

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

21.1. 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]

21.2. Conduct source tests under conditions specified by EPA to be based on representative performance of EU IDs 2 and 3 (when equipped with Solar turbine engines with serial nos. 0756S21 or 0753S21).

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

21.3. Notify the Department and EPA at least 30 days in advance of the source test.

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

21.4. 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]

22. NSPS Subpart A Good Air Pollution Control Practice. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU IDs 2 and 3 (when equipped with Solar turbine engines with serial nos. 0756S21 or 0753S21) including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU IDs 2 and 3.

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

23. 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 26 and 27, nothing in 40 C.F.R. Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 2 and 3 (when equipped with Solar turbine engines with serial nos. 0756S21 or 0753S21) would have been in compliance with applicable requirements of 40 C.F.R. Part 60 if the appropriate performance or compliance test or procedure had been performed.

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

24. 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 Condition 26 or 27. 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]

Turbines Subject to Federal NSPS Subpart GG

25. Turbine Engine Replacement and Relocations (EU IDs 2 and 3). The Permittee may move turbine engines, from a pool of turbine engines, from location to location between Trans Alaska Pipeline System (TAPS) pump stations to allow for maintenance of turbine engines. Solar turbine engines with serial numbers 0756S21 and 0753S21 may be used to replace the existing turbine engines located in positions for EU IDs 2 and 3. Conditions 25.2 through 25.5 apply only to Solar gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour.

25.1. The Permittee shall comply with the requirements of NSPS Subpart GG as set out in Condition 27 when EU IDs 2 and/or 3 are equipped with Solar turbine engines with serial number 0756S21 or 0753S21.

25.2. The Permittee shall maintain, for each turbine engine, records of the maintenance, repairs, parts replacement, including the date of each servicing, the service performed, and the costs of the service.

25.3. The Permittee shall maintain records of the following information each time a turbine engine from the pool is switched into service:

a. The date the switched occurred; and

b. Identification of the removed turbine and the substitute turbine engine by make, model, date of manufacture, serial number, maximum heat input, and location.

25.4. The Permittee shall notify the Department in writing no later than 14 days after any rotation of a Subpart GG turbine into an operating turbine position.

25.5. The Permittee shall submit a copy of the records required by Condition 25.3 with the operating report required by Condition 63 for all turbine engines switched during the reporting period.

[EPA Letter, 40 C.F.R. 60 Subpart GG Applicability Determination, 8/1/2002]
[18 AAC 50.040(a)(2)(V), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (3)]

26. NSPS Subpart GG NO_X Standard.

26.1. The Permittee shall not allow the exhaust gas concentration of NO_X, on a dry basis at 15 percent O_2 and ISO conditions, from each of EU IDs 2 and 3 (when equipped with a Solar turbine engine with serial nos. 0756S21 or 0753S21 per Condition 25) to exceed 150 ppmv.

[18 AAC 50.040(a)(2)(V), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.332(a)(2) & (d), Subpart GG]

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

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

a. **Periodic Testing.** For each turbine subject to Condition 26 that operates for 400 hours or more in any 12-consecutive-month period during the life of this permit, the Permittee shall comply with Conditions 26.2.a(i)(B) and 26.2.a(ii) for that turbine.

(i) For existing turbines whose latest emissions source testing was certified as operating at less than or equal to 90 percent of the limit shown in Condition 26, the Permittee shall conduct a NO_X and O_2 source test under 40 C.F.R. 60, Appendix A, Method 20, or Method 7E and either Method 3 or 3A, within the first applicable criteria below:

(A) Within 5 years of the latest performance test, or

(B) Within 1 year of exceeding the 400 hour of operation threshold in Condition 26.2.a, if the previous source test occurred greater than 4 years prior to the exceedance.

(ii) For existing turbines whose latest emissions source testing was certified as operating at greater than 90 percent of the limit shown in Condition 26, the Permittee shall conduct a NO_X and O_2 source test under 40 C.F.R. 60, Appendix A, Method 20, or Method 7E and either Method 3 or 3A, annually until two consecutive tests show performance results certified at less than or equal to 90 percent of the limit shown in Condition 26.

b. **Substituting Test Data.** The Permittee may use a Method 20, or Method 7E and either Method 3 or 3A, test under Condition 26.2.a performed on only one of a group of turbines to satisfy the requirements of those conditions for the other turbines in the group if

(i) the Permittee demonstrates that test results are less than or equal to 90 percent of the NO_X limit in Condition 26, and are projected under Condition 26.2.c to be less than or equal to 90 percent of the limit at maximum load;

(ii) for any source test done after the issuance date of this permit, the Permittee identifies in a source test plan under Condition 54

(A) the turbine to be tested;

(B) the other turbines in the group that are to be represented by the test; and

(C) why the turbine to be tested is representative, including that each turbine in the group

(1) is located at a stationary source operated and maintained by the Permittee;

(2) is tested under close to identical ambient conditions;

(3) is the same make and model and has identical injectors and combustor;

(4) uses the same fuel type from the same source.

(iii) The Permittee may not use substitute test results to represent emissions from a turbine or group of turbines if that turbine or group of turbines is operating at greater than 90 percent of the NO_X limit in Condition 26.

c. **Load.** The Permittee shall comply with the following:

(i) Conduct all tests under Condition 26.2 in accordance with 40 C.F.R. 60.335, except as otherwise approved in writing by the Department, or by EPA if the circumstances at the time of the EPA approval are still valid. For the highest load condition, if it is not possible to operate the turbine during the test at maximum load, the Permittee will test the turbine when operating at the highest load achievable by the turbine under the ambient and stationary source operating conditions in effect at the time of the test.

(ii) Demonstrate in the source test plan for any test performed after the issue date of this permit whether the test is scheduled when maximum NO_X emissions are expected.

(iii) If the highest operating rate tested is less than the maximum load of the tested turbine or another turbine represented by the test data,

(A) for each such turbine the Permittee shall provide to the Department as an attachment to the source test report

(1) additional test information from the manufacturer or from previous testing of units in the group of turbines; if using previous testing of the group of turbines, the information must include all available test data for the turbines in the group, and

(2) a demonstration based on the additional test information that projects the test results from Condition 26.2 to predict the highest load at which emissions will comply with the NO_X limit in Condition 26;

(B) the Permittee shall not operate any turbine represented by the test data at loads for which the Permittee's demonstration predicts that emissions will exceed the NO_X limit shown in Condition 26;

(C) the Permittee shall comply with a written finding prepared by the Department that

(1) the information is inadequate for the Department to reasonably conclude that compliance is assured at any load greater than the test load, and that the Permittee must not exceed the test load,

(2) the highest load at which the information is adequate for the Department to reasonably conclude that compliance assured is less than maximum load, and the Permittee must not exceed the highest load at which compliance is predicted, or

(3) the Permittee must retest during a period of greater expected demand on the turbine, and

(D) the Permittee may revise a load limit by submitting results of a more recent Method 20, or Method 7E and either Method 3 or 3A, test done at a higher load, and, if necessary, the accompanying information and demonstration described in Condition 26.2.c(iii)(A); the new limit is subject to any new Department finding under Condition 26.2.c(iii)(C) and

(iv) In order to perform a Method 20, or Method 7E and either Method 3 or 3A, emission test, the Permittee may operate a turbine at a higher load than that prescribed by Condition 26.2.c(iii).

(v) For the purposes of Conditions 26.2 through 26.4, maximum load means the hourly average load that is the smallest of

(A) 100 percent of manufacturer's design capacity of the gas turbine at ISO standard day conditions;

(B) the highest load allowed by an enforceable condition that applies to the turbine; or

(C) the highest load possible considering permanent physical restraints on the turbine or the equipment which it powers.

26.3. **Recordkeeping.** The Permittee shall keep records as follows:

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

a. The Permittee shall comply with the following for each turbine for which a demonstration under Condition 26.2.c(iii) does not show compliance with the NO_X limit in Condition 26 at maximum load.

(i) The Permittee shall keep records of

(A) load; or

(B) as approved by the Department, surrogate measurements for load and the method for calculating load from those measurements.

(ii) Records in Condition 26.3.a shall be hourly or otherwise as approved by the Department.

(iii) Within one month after submitting a demonstration under Condition 26.2.c(iii)(A)(2) that predicts that the highest load at which emissions will comply is less than maximum load, or within one month of a Department finding under Condition 26.2.c(iii)(C), whichever is earlier, the Permittee shall propose to the Department how they will measure load or load surrogates, and shall propose and comply with a schedule for installing any necessary equipment and beginning monitoring. The Permittee shall comply with any subsequent Department direction on the load monitoring methods, equipment, or schedule.

b. Prior to exceeding the hour threshold in Condition 26.2.a, the Permittee shall keep monthly records of the hours of operation of any turbine subject to Condition 26.

26.4. **Reporting.** The Permittee shall keep report as follows:

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

a. In each operating report under Condition 63 the Permittee shall list for each turbine tested or represented by testing at less than maximum load and for which the Permittee must limit load under Condition 26.2.c(iii)

(i) the load limit;

(ii) the turbine identification; and

(iii) the highest load recorded under Condition 26.3.a during the period covered by the operating report.

b. In each operating report under Condition 63 for each turbine for which Condition 26.2 has not been satisfied because the turbine operates less than 400 hours, the Permittee shall identify

(i) the turbine;

(ii) the highest number of operating hours for any 12 consecutive months ending during the period covered by the report; and

(iii) any turbine that operated for 400 or more hours.

c. The Permittee shall report under Condition 62 if

(i) a test result exceeds the emission standard;

(ii) Method 20, or Method 7E and either Method 3 or 3A, testing is required under Condition 26.2.a(i) or 26.2.a(ii) but not performed, or

(iii) the turbine was operated at a load exceeding that allowed by Conditions 26.2.c(iii)(B) and 26.2.c(iii)(C); exceeding a load limit is deemed a single violation rather than a multiple violation of both monitoring and the underlying emission limit.

[18 AAC 50.220(a) through (c) & 50.040(a)(1)]
[40 C.F.R. 60.8(b), Subpart A]

27. NSPS Subpart GG Sulfur Standard. For EU IDs 2 and 3 (when equipped with a Solar turbine engine with serial nos. 0756S21 or 0753S21 per Condition 25), the Permittee shall not burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 percent by weight (8000 ppmw).

[18 AAC 50.040(a)(2)(V), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.333(b), Subpart GG]

27.1. **Monitoring.** The Permittee shall monitor compliance with the standards listed in this condition, as follows:

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

a. Monitor the total sulfur content of the fuel being fired in the turbine. The sulfur content of the fuel must be determined using total sulfur methods described in Condition 27.2.

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

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

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

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

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

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

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

27.2. **Test Methods and Procedures.** If the owner or operator is required under Condition 27.1.c to periodically determine the sulfur content of the fuel combusted in the turbine, analyze the samples for the total sulfur content of the fuel using ASTM D129-00, D2622-98, D4294-02, D1266-98, D5453-00 or D1552-01 (all of which are incorporated by reference, see 40 C.F.R. 60.17).

[18 AAC 50.040(a)(2)(V), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i)]
[40 C.F.R. 60.335(b)(10)(i), Subpart GG]

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

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

27.3. **Recordkeeping.** The Permittee shall keep records as required by Conditions 27.1 and 27.2, and in accordance with Condition 58.

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

27.4. **Reporting.** For each affected unit that elects to periodically determine the fuel sulfur content under Condition 27.1, the owner or operator shall submit reports of excess emissions and monitor downtime, in accordance with 40 C.F.R. 60.7(c) as summarized in Condition 19, except where otherwise approved by a custom fuel monitoring schedule. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under 40 C.F.R. 60.7(c), periods of excess emissions and monitor downtime that shall be reported are defined as follows:

[18 AAC 50.040(a)(2)(V), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)]
[40 C.F.R. 60.334(j), Subpart GG]

a. If the owner or operator is required to monitor the sulfur content of the fuel under Condition 27.1:

[40 C.F.R. 60.334(j)(2), Subpart GG]

(i) For oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

(ii) If the option to sample each delivery of fuel oil has been selected, the owner or operator shall immediately switch to one of the other oil sampling options (i.e., daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.8 weight percent. The owner or operator shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and shall evaluate excess emissions according to Condition 27.4.a(i). When all of the fuel from the delivery has been burned, the owner or operator may resume using the as-delivered sampling option.

(iii) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample.

[40 C.F.R. 60.334(j)(2)(i) through (iii), Subpart GG]

Emission Units Subject to Federal NESHAP Subpart A

28. NESHAP Subpart A Requirements. For EU ID 21, the Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart A in accordance with the provisions for applicability of Subpart A in Table 8 to NESHAP Subpart ZZZZ. For EU IDs 9 and 10, the Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart A in accordance with the provisions for applicability of Subpart A in Table 8 to NESHAP Subpart JJJJJJ.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 63.6665 & Table 8, Subpart ZZZZ]

Engines Subject to Federal NESHAP Subpart ZZZZ

29. For EU ID 21, the Permittee shall comply with all applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions.

[18 AAC 50.040(c)(23), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 63.6585, 63.6590, & 63.6590(a), Subpart ZZZZ]

NESHAP Subpart ZZZZ Emission Limitations, Operating Limitations, and Other Requirements

29.1. For EU ID 21, the Permittee shall comply with the following:

[18 AAC 50.040(c)(23), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

a. You must meet the following requirements, except during periods of startup:

(i) Change oil and filter every 500 hours of operation or annually, whichever comes first;

(ii) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;

(iii) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

b. During periods of startup you must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

c. Sources have the option to utilize an oil analysis program as described in Condition 29.6 in order to extend the specified oil change requirement in Condition 29.1.a(i).

d. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Condition 29.1.a, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[40 C.F.R. 63.6603(a), 63.6625(h), & Table 2d, Item 4, Subpart ZZZZ]

NESHAP Subpart ZZZZ Fuel Requirements

29.2. For EU ID 21, the Permittee shall comply with the following:

[18 AAC 50.040(c)(23), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

a. Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in Conditions 29.7.c(ii)(B) and 29.7.c(ii)(C) or that operates for the purpose specified in 40 C.F.R. 63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 C.F.R. 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

[40 C.F.R. 63.6604(b), Subpart ZZZZ]

NESHAP Subpart ZZZZ General Requirements

29.3. For EU ID 21, the Permittee shall comply with the following:

[18 AAC 50.040(c)(23), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

a. You must be in compliance with the emission limitations, operating limitations, and other requirements in NESHAP Subpart ZZZZ that apply to you at all times.

[40 C.F.R. 63.6605(a), Subpart ZZZZ]

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

[40 C.F.R. 63.6605(b), Subpart ZZZZ]

NESHAP Subpart ZZZZ Monitoring, Installation, Collection, Operation, and Maintenance Requirements

29.4. For EU ID 21, the Permittee must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[18 AAC 50.040(c)(23), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 63.6625(e), Subpart ZZZZ]

29.5. The Permittee must install a non-resettable hour meter on EU ID 21 if one is not already installed.

[18 AAC 50.040(c)(23), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 63.6625(f), Subpart ZZZZ]

29.6. For EU ID 21, the Permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Condition 29.1.a. The oil analysis must be performed at the same frequency specified for changing the oil in Condition 29.1.a. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the Permittee is not required to change the oil. If any of the limits are exceeded, the Permittee must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the Permittee must change the oil within 2 business days or before commencing operation, whichever is later. The Permittee must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[18 AAC 50.040(c)(23), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 63.6625(i), Subpart ZZZZ]

NESHAP Subpart ZZZZ Requirements for Demonstration of Continuous Compliance with Emission Limitations, Operating Limitations, and Other Requirements

29.7. For EU ID 21, the Permittee shall comply with the following:

[18 AAC 50.040(c)(23), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

a. You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Condition 29.1 according to methods specified in Condition 29.7.a(i) or 29.7.a(ii).

[40 C.F.R. 63.6640(a), Subpart ZZZZ]

(i) Operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or

(ii) Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[Table 6, Item 9, Subpart ZZZZ]

b. You must also report each instance in which you did not meet the requirements in Table 8 to NESHAP Subpart ZZZZ that apply to you.

[40 C.F.R. 63.6640(e), Subpart ZZZZ]

c. If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in Conditions 29.7.c(i) through 29.7.c(iii). In order for the engine to be considered an emergency stationary RICE under NESHAP Subpart ZZZZ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in Conditions 29.7.c(i) through 29.7.c(iii), is prohibited. If you do not operate the engine according to the requirements in Conditions 29.7.c(i) through 29.7.c(iii), the engine will not be considered an emergency engine under NESHAP Subpart ZZZZ and must meet all requirements for non-emergency engines.

[40 C.F.R. 63.6640(f), Subpart ZZZZ]

(i) There is no time limit on the use of emergency stationary RICE in emergency situations.

(ii) You may operate your emergency stationary RICE for any combination of the purposes specified in Conditions 29.7.c(ii)(A) through 29.7.c(ii)(C) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 29.7.c(iii) counts as part of the 100 hours per calendar year allowed by this condition.

[40 C.F.R. 63.6640(f)(1) & (2), Subpart ZZZZ]

(A) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the 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) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see 40 C.F.R. 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

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

[40 C.F.R. 63.6640(f)(2)(i) through (iii), Subpart ZZZZ]

(iii) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in Condition 29.7.c(ii). Except as provided in 40 C.F.R. 63.6640(f)(4)(i) and (ii), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[40 C.F.R. 63.6640(f)(4), Subpart ZZZZ]

NESHAP Subpart ZZZZ Reporting Requirements

29.8. For EU ID 21, the Permittee shall comply with the following:

[18 AAC 50.040(c)(23), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)]

a. The Permittee must report all deviations as defined in NESHAP Subpart ZZZZ in the semiannual monitoring report required by Condition 63.

[40 C.F.R. 63.6650(f), Subpart ZZZZ]

b. If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in Conditions 29.7.c(ii)(B) and 29.7.c(ii)(C) or that operates for the purpose specified in 40 C.F.R. 63.6640(f)(4)(ii), you must submit an annual report according to the requirements in Conditions 29.8.b(i) through 29.8.b(iii).

[40 C.F.R. 63.6650(h) & Table 7, Item 4, Subpart ZZZZ]

(i) The report must contain the information in 40 C.F.R. 63.6650(h)(1)(i) through (ix).

(ii) 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.

(iii) 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 NESHAP Subpart ZZZZ 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)(1) through (3), Subpart ZZZZ]

NESHAP Subpart ZZZZ Recording Requirements

29.9. For EU ID 21, the Permittee shall comply with the following:

[18 AAC 50.040(c)(23), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii)]

a. You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan.

[40 C.F.R. 63.6655(e), Subpart ZZZZ]

b. You must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in Condition 29.7.c(ii)(B) or 29.7.c(ii)(C) or 40 C.F.R. 63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

[40 C.F.R. 63.6655(f), Subpart ZZZZ]

c. Your records must be in a form suitable and readily available for expeditious review according to 40 C.F.R. 63.10(b)(1).

[40 C.F.R. 63.6660(a), Subpart ZZZZ]

d. As specified in 40 C.F.R. 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[40 C.F.R. 63.6660(b), Subpart ZZZZ]

e. You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. 63.10(b)(1).

[40 C.F.R. 63.6660(c), Subpart ZZZZ]

Boilers Subject to Federal NESHAP Subpart JJJJJJ

30. For EU IDs 9 and 10, the Permittee shall comply with all applicable requirements of NESHAP Subpart JJJJJJ for existing industrial, commercial, and institutional boilers located at an area source of HAPs.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 63.11193 & 63.11194, Subpart JJJJJJ]

NESHAP Subpart JJJJJJ General Requirements

30.1. For EU IDs 9 and 10, the Permittee shall comply with the following:

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

a. 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 practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the EPA and the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 C.F.R. 63.11205(a), Subpart JJJJJJ]

NESHAP Subpart JJJJJJ Initial Compliance Requirements

30.2. For EU IDs 9 and 10, the Permittee shall comply with the following:

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

a. For affected boilers that switch fuels or make a physical change to the boiler that results in the applicability of a different subcategory within NESHAP Subpart JJJJJJ or the boiler becoming subject to NESHAP Subpart JJJJJJ, you must 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 Condition 30.4.f.

[40 C.F.R. 63.11210(h), Subpart JJJJJJ]

NESHAP Subpart JJJJJJ Continuous Compliance Requirements

30.3. For EU IDs 9 and 10, the Permittee shall comply with the following:

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

a. You must conduct a performance tune-up according to Condition 30.3.b and keep records as required in Condition 30.4.c 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. 63.11201(b), 63.11223(a), & Table 2, Item 12, Subpart JJJJJJ]

b. You must conduct a tune-up of the boiler every 5 years to demonstrate continuous compliance as specified in Conditions 30.3.b(i) through 30.3.b(vii). Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up.

[40 C.F.R. 63.11223(b) & (e), Subpart JJJJJJ]

(i) 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, not to exceed 72 months from the previous inspection).

(ii) 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.

(iii) 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 72 months from the previous inspection).

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available.

(v) Measure the concentrations in the effluent stream of CO 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.

(vi) Maintain on-site and submit, if requested by the EPA or Department, a report containing the information in Conditions 30.3.b(vi)(A) through 30.3.b(vi)(C).

[40 C.F.R. 63.11223(b)(1) through (6), Subpart JJJJJJ]

(A) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler.

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

(C) 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.

[40 C.F.R. 63.11223(b)(6)(i) through (iii), Subpart JJJJJJ]

(vii) 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)(7), Subpart JJJJJJ]

NESHAP Subpart JJJJJJ Notification, Reporting, and Recordkeeping Requirements

30.4. For EU IDs 9 and 10, the Permittee shall comply with the following:

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

a. You must submit all of the notifications to the EPA and the Department in 40 C.F.R. 63.8(f), 63.9(c) and (d), and 63.9(h) that apply to you by the dates specified in those sections.

[40 C.F.R. 63.11225(a) & (a)(1), Subpart JJJJJJ]

b. You must prepare, by March 1, and submit to the Department and EPA upon request, a compliance certification report. For boilers that are subject only to a requirement to conduct a 5-year tune-up according to Condition 30.3.a and not subject to emission limits or operating limits, you may prepare only a 5-year compliance report as specified in Conditions 30.4.b(i) and 30.4.b(ii).

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

(i) Company name and address.

[40 C.F.R. 63.11225(b)(1), Subpart JJJJJJ]

(ii) Statement by a responsible official, with the official's name, title, phone number, e-mail 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 signed by a responsible official:

[40 C.F.R. 63.11225(b)(2), Subpart JJJJJJ]

(A) ''This facility complies with the requirements in § 63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler.''

[40 C.F.R. 63.11225(b)(2)(i), Subpart JJJJJJ]

(B) 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.’’

[40 C.F.R. 63.11225(b)(2)(ii), Subpart JJJJJJ]

c. You must maintain the records specified in Conditions 30.4.c(i) through 30.4.c(iv).

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

(i) As required in 40 C.F.R. 63.10(b)(2)(xiv), you must keep a copy of each notification and report that you 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), Subpart JJJJJJ]

(ii) You must keep records to document conformance with the work practices, emission reduction measures, and management practices required by 40 C.F.R. 63.11214 and Condition 30.3 as specified in Conditions 30.4.c(ii)(A) and 30.4.c(ii)(B).

[40 C.F.R. 63.11225(c)(2), Subpart JJJJJJ]

(A) 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), Subpart JJJJJJ]

(B) For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to 40 C.F.R. 241.3(b)(1), you must keep a record which documents how the secondary material meets each of the legitimacy criteria under 40 C.F.R. 241.3(d)(1). If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to 40 C.F.R. 241.3(b)(4), you must keep records as to how the operations that produced the fuel satisfies the definition of processing in 40 C.F.R. 241.2 and each of the legitimacy criteria in 40 C.F.R. 241.3(d)(1). If the fuel received a non-waste determination pursuant to the petition process submitted under 40 C.F.R. 241.3(c), you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust nonhazardous secondary materials as fuel per 40 C.F.R. 241.4, you must keep records documenting that the material is a listed non-waste under 40 C.F.R. 241.4(a).

[40 C.F.R. 63.11225(c)(2)(ii), Subpart JJJJJJ]

(iii) 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), Subpart JJJJJJ]

(iv) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in Condition 30.1.a, 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), Subpart JJJJJJ]

d. Your records must be in a form suitable and readily available for expeditious review. You must keep each record for 5 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 2 years after the date of each recorded action. You may keep the records off site for the remaining 3 years.

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

e. If you intend to commence or recommence combustion of solid waste, you must provide 30 days prior notice of the date upon which you 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), Subpart JJJJJJ]

f. 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, in the boiler becoming subject to NESHAP Subpart JJJJJJ, or in the boiler switching out of NESHAP Subpart JJJJJJ due to a change to 100 percent natural gas, or you have taken a permit limit that resulted in you being subject to NESHAP Subpart JJJJJJ, you must provide notice of the date upon which you switched fuels, made the physical change, or took a permit limit within 30 days of the change. The notification must identify the items in 40 C.F.R. 63.11225(g)(1) and (2).

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

General Federal Requirements

31. 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.

[18 AAC 50.040(b)(1) & (2)(F), & 50.326(j)]
[40 C.F.R. 61, Subparts A & M, and Appendix A]

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

Subpart F – Recycling and Emissions Reduction

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

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

Subpart G – Significant New Alternatives Policy

32.2. 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) through (d), Subpart G]

Subpart H – Halon Emissions Reduction

32.3. 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) through (f), Subpart H]

NESHAPs Applicability Determinations

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

33.1. 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), 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii)]
[40 C.F.R. 63.1(b), 63.5(b)(4), 63.6(c)(1), & 63.10(b)(3)]

34. NSPS and NESHAP Reports. The Permittee shall:

34.1. **Reports:** Attach to the operating report required by Condition 63 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, unless previously submitted to the Department; and

34.2. **Waivers**: Upon request by the Department, provide a written copy of any EPA-granted alternative monitoring requirement, custom monitoring schedule or waiver of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements. The Permittee shall keep a copy of each U.S. EPA issued monitoring waiver or custom monitoring schedule with the permit.

[18 AAC 50.326(j)(4) & 50.040(j)]
[40 C.F.R. 60.13, 63.10(d) & (f), & 71.6(c)(6)]

Section 5. General Conditions

Standard Terms and Conditions

35. 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)]

36. 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)]

37. 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)]

38. Administration Fees. The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-405.

[18 AAC 50.326(j)(1), 50.400, 50.403, & 50.405]
[AS 37.10.052(b) & AS 46.14.240]

39. 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. 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

39.1. the stationary source's assessable potential to emit of 823 TPY; or

39.2. 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), 50.035, 50.326(j)(1), 50.346(b)(1), 50.410, & 50.420]
[40 C.F.R. 71.5(c)(3)(ii)]

40. Assessable Emission Estimates. Emission fees will be assessed as follows:

40.1. 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., Juneau, AK 99801-1795; 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

40.2. if no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 39.1.

[18 AAC 50.040(j)(3), 50.326(j)(1), 50.346(b)(1), 50.410, & 50.420]
[40 C.F.R. 71.5(c)(3)(ii)]

41. Good Air Pollution Control Practice. The Permittee shall do the following for EU IDs 1 through 8, 11, and 20:

41.1. perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;

41.2. keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and

41.3. keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.030, 50.326(j)(3), & 50.346(b)(5)]

42. 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)]

43. Reasonable Precautions to Prevent Fugitive Dust. A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.

[18 AAC 50.045(d), 50.040(e), 50. 326(j)(3), & 50.346(c)]

43.1. 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 43.1 or to address the results of Department inspections that found potential problems; and

(ii) to prevent future dust problems.

43.2. The Permittee shall report according to Condition 45.

44. 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)]

45. Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 50.040(e), 50.326(j)(3), & 50.346(a)]
[40 C.F.R. 71.6(a)(3)]

45.1. Monitoring, Recordkeeping, and Reporting for Condition 45:

a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 62.

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 45.

45.2. 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 45; or

b. the Department notifies the Permittee that it has found a violation of Condition 45.

45.3. 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 45; and

d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

45.4. With each operating report under Condition 63, 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.

45.5. 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.

46. 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[6] listed in Condition 26, 27, or 32 (refrigerants), the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under Condition 62 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 62.

[18 AAC 50.235(a), 50.326(j)(4), & 50.040(j)(4)]
[40 C.F.R. 71.6(c)(6)]

Open Burning Requirements

47. Open Burning. If the Permittee conducts open burning at this stationary source, the Permittee shall comply with the requirements of 18 AAC 50.065.

47.1. The Permittee shall keep written records to demonstrate that the Permittee complies with the limitations in this condition and the requirements of 18 AAC 50.065. Upon request by the Department, submit copies of the records.

47.2. Compliance with this condition shall be an annual certification conducted under Condition 64.

[18 AAC 50.065, 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)(3)]

[6] *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.

Section 6. General Source Testing and Monitoring Requirements

48. Requested Source Tests. In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a) & 50.345(a) & (k)]

49. Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

[18 AAC 50.220(b)]

49.1. at a point or points that characterize the actual discharge into the ambient air; and

49.2. at the maximum rated burning or operating capacity of the emission unit or another rate determined by the Department to characterize the actual discharge into the ambient air.

50. Reference Test Methods. The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

50.1. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.220(c)(1)(A) & 50.040(a)]
[40 C.F.R. 60]

50.2. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b) & 50.220(c)(1)(B)]
[40 C.F.R. 61]

50.3. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c) & 50.220(c)(1)(C)]
[40 C.F.R. 63]

50.4. 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 & 50.220(c)(1)(D)]

50.5. Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(3) & 50.220(c)(1)(E)]
[40 C.F.R. 60, Appendix A]

50.6. Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.

[18 AAC 50.035(b)(2) & 50.220(c)(1)(F)]
[40 C.F.R. 51, Appendix M]

50.7. Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

[18 AAC 50.040(c)(24) & 50.220(c)(2)]
[40 C.F.R. 63, Appendix A, Method 301]

51. Excess Air Requirements. To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific emission unit type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3) & 50.990(102)]

52. Test Exemption. The Permittee is not required to comply with Conditions 54, 55 and 56 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 3.1) or Smoke/No Smoke Plan (Condition 3.2).

[18 AAC 50.345(a)]

53. 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)]

54. Test Plans. Except as provided in Condition 52, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the emission unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 48 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)]

55. Test Notification. Except as provided in Condition 52, 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)]

56. Test Reports. Except as provided in Condition 52, 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 certify the results in the manner set out in Condition 59. 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)]

57. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in Conditions 6 and 14.2, the three-hour average is determined using the average of three one-hour test runs.

[18 AAC 50.220(f)]

Section 7. General Recordkeeping and Reporting Requirements

Recordkeeping Requirements

58. 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 50.040(a)(1) & 50.326(j)]
[40 C.F.R 60.7(f), Subpart A, 40 C.F.R 71.6(a)(3)(ii)(B)]

58.1. Copies of all reports and certifications submitted pursuant to this section of the permit; and

58.2. Records of all monitoring required by this permit, and information about the monitoring including:

a. the date, place, and time of sampling or measurements;

b. the date(s) analyses were performed;

c. the company or entity that performed the analyses;

d. the analytical techniques or methods used;

e. the results of such analyses; and,

f. the operating conditions as existing at the time of sampling or measurement.

Reporting Requirements

59. Certification. The Permittee shall certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: *"Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete."* Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.

59.1. 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 59.1.a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

[18 AAC 50.345(a) & (j), 50.205, & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)(A)]

60. Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall send an original and one 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 59.

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

61. Information Requests. The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the Federal Administrator.

[18 AAC 50.345(a) & (i), 50.200, & 50.326(a) & (j)]
[40 C.F.R. 71.5(a)(2) & 71.6(a)(3)]

62. Excess Emissions and Permit Deviation Reports.

62.1. Except as provided in Condition 45, 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 nonroutine 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 excess emissions or deviation occurred, except as provided in Conditions 62.1.c(ii) and 62.1.c(iii);

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 62.1.c(i); and

(iii) for failure to monitor, as required in other applicable conditions of this permit.

62.2. When reporting excess emissions or permit deviations, the Permittee shall 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 if the Permittee prefers, the form contained in Section 14 of this permit. The Permittee must provide all information called for by the form that is used.

62.3. If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.235(a)(2), 50.240(c), 50.326(j)(3), & 50.346(b)(2) & (3)]

63. Operating Reports. During the life of this permit[7], the Permittee shall submit to the Department an 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.

63.1. The operating report must include all information required to be in operating reports by other conditions of this permit.

63.2. If excess emissions or permit deviations that occurred during the reporting period are not reported under Condition 63.1,

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 62 the Permittee shall cite the date or dates of those reports.

63.3. The operating report must include a listing of emissions monitored under Conditions 3.1.e and 3.2.c which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report.

a. the date of the emissions;

b. the equipment involved;

c. the permit condition affected; and

[7] *Life of this permit* is defined as the permit effective dates, including any periods of reporting obligations that extend beyond the permit effective dates. For example if a permit expires prior to the end of a calendar year, there is still a reporting obligation to provide operating reports for the periods when the permit was in effect.

d. the monitoring result which triggered the additional monitoring.

63.4. **Transition from expired to renewed permit**. For the first period of this renewed operating permit, also provide the previous permit's operating report elements covering that partial period immediately preceding the effective date of this renewed permit.

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

64. Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the Department an original and one copy of an annual compliance certification report[8].

64.1. 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 9, 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;

64.2. **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.

64.3. In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.205, 50.345(a) & (j), & 50.326(j)]
[40 C.F.R. 71.6(c)(5)]

65. Emission Inventory Reporting. The Permittee shall submit to the Department reports of actual emissions, by emission unit, of CO, NH_3, NO_X, PM_{10}, $PM_{2.5}$, SO_2, VOCs and Lead (Pb) (and lead compounds) using the form in Section 15 of this permit, as follows:

65.1. Each year by March 31, if the stationary source's potential to emit emissions for the previous calendar year:

a. equal or exceed 250 tons per year (TPY) of NH_3, PM_{10}, $PM_{2.5}$ or VOCs; or

b. equal or exceed 2,500 TPY of CO, NO_X or SO_2.

65.2. Every third year by March 31 if the stationary source's potential to emit emissions for the previous calendar year exceed:

[8] See Condition 64.2 for clarification on the number of reports required.

a. 5 tons per year of lead (Pb), 1,000 TPY of CO; or

b. 100 TPY of SO_2, NH_3, PM_{10}, $PM_{2.5}$, NO_X or VOCs.

65.3. For Condition 65.2, the Permittee shall commence reporting in 2015 for the calendar year of 2014, 2018 for calendar year 2017, etc.

65.4. Include in the report required by this condition, the required data elements contained within the form in Section 15 or those contained in Table 2A of Appendix A to Subpart A of 40 C.F.R. 51 (final rule published in 73 FR 76556 (December 17, 2008)) for each stack associated with an emission unit.

[18 AAC 50.346(b)(8) &18 AAC 50.200]
[40 C.F.R. 51.15, 51.30(a)(1) & (b)(1); & 40 C.F.R. 51, Appendix A to Subpart A]

Section 8. Permit Changes and Renewal

66. Permit Applications and Submittals. The Permittee shall comply with the following requirements for submitting application information to the EPA Region 10:

66.1. 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[9];

66.2. The information shall be submitted to the same address as in Condition 64.3.

66.3. To the extent practicable, the Permittee shall provide to EPA applications in portable document format (PDF); MS Word format (.doc); or other computer-readable format compatible with EPA's national database management system; and

66.4. The Permittee shall maintain records as necessary to demonstrate compliance with this condition.

[18 AAC 50.040(j)(7) & 50.326(b)]
[40 C.F.R. 71.10(d)(1)]

67. Emissions Trading. No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(8)]

68. 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:

68.1. Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;

68.2. 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;

68.3. The change shall not qualify for the shield under 40 C.F.R. 71.6(f);

[9] The documents required in Condition 66.1 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.

68.4. The Permittee shall keep a record describing changes made at the stationary source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(12)]

69. Operational Flexibility. The Permittee may make Section 502(b)(10)[10] 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):

69.1. The Permittee shall provide EPA and the Department with a notification no less than 7 days in advance of the proposed change.

69.2. 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.

69.3. The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 69.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(13)]

70. 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), 50.326(c)(2) & (j)(2)]
[40 C.F.R. 71.5(a)(1)(iii) & 71.7(b) & (c)(1)(ii)]

[10] As defined in 40 C.F.R. 71.2, Section 502(b)(10) changes are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

Section 9. Compliance Requirements

General Compliance Requirements

71. Compliance with permit terms and conditions is considered to be compliance with those requirements that are

71.1. included and specifically identified in the permit; or

71.2. determined in writing in the permit to be inapplicable.

[18 AAC 50.326(j)(3) & 50.345(a) & (b)]

72. The Permittee must comply with each permit term and condition.

72.1. For applicable requirements with which the stationary source is in compliance, the Permittee shall continue to comply with such requirements.

72.2. Noncompliance with a permit term or condition constitutes a violation of AS 46.14.120(c), 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

a. an enforcement action;

b. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

c. denial of an operating permit renewal application.

[18 AAC 50.040(j), 326(j) & 50.345(a) & (c)]
[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(A)]

73. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.326(j)(3) & 50.345(a) & (d)]

74. 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

74.1. enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;

74.2. have access to and copy any records required by the permit;

74.3. inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

74.4. 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)]

75. For applicable requirements that will become effective during the permit term, the Permittee shall meet such requirements on a timely basis.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(B)]

Section 10. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the permit application, this section of the permit contains the requirements determined by the Department not to be applicable to the stationary source.

76. Nothing in this permit shall alter or affect the following:

76.1. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; or

76.2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance.

[18 AAC 50.326(j)]
[40 C.F.R. 71.6(f)(3)(i) & (ii)]

77. Table B 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 B becomes applicable during the permit term, the Permittee shall comply with such requirements on a timely basis including, but not limited to, providing appropriate notification to EPA, obtaining a construction permit and/or an operating permit revision.

[18 AAC 50.326(j)]
[40 C.F.R. 71.6(f)(1)(ii)]

Table B - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
7 and 8	40 C.F.R. 63 Subpart JJJJJJ	Units are process heaters, not boilers as defined in 40 CFR 63.11237.
Model PF-504 boilers (2)	40 C.F.R. 63 Subpart JJJJJJ	IEU boilers meet the definition of Hot Water Heaters [§63.11236]. Hot water heaters are excluded from the requirements of this subpart [§63.11195]. Therefore, IEU heaters are exempt from the requirements of this subpart.
Bock hot water heater	40 C.F.R. 63 Subpart JJJJJJ	IEU heater meets the definition of Hot Water Heaters [§63.11236]. Hot water heaters are excluded from the requirements of this subpart [§63.11195]. Therefore, IEU heaters are exempt from the requirements of this subpart.
Hotsy steam cleaning unit	40 C.F.R. 63 Subpart JJJJJJ	IEU heater meets the definition of Hot Water Heaters [§63.11236]. Hot water heaters are excluded from the requirements of this subpart [§63.11195]. Therefore, IEU heaters are exempt from the requirements of this subpart.

Section 11. HAP Content of Crude Oil Storage Tank Vapors

This section provides a step-by-step procedure for determining the Hazardous Air Pollutants (HAPs) for the crude oil storage tank vapors. Alyeska will conduct laboratory tests of the crude oil to determine the weight fraction of various components. These weight fractions are then used, through many calculations, to determine the HAP emission rate from the tank.

I. Sample Description/Comments

1. Sample Location _____
2. Sample Date _____
3. Sample ID _____
4. Core Laboratories data includes crude molecular weight and component wt% values.

II. Determine Component Mole Fractions in Liquid Crude

Methodology Assumptions/Comments:

1. The component mole fraction in crude is determined from component weight fraction and component molecular weight by assuming a mass of 1,000 lb of crude (see AP-42 Section 7.1.5).
2. The component molecular weight of Decanes+ is equal to the value required for the sum of all molecular weights to be equal to the Core Laboratories measured crude molecular weight of: ___ lb/lb-mole

Liquid Crude Analysis Data		Calculate Component Mole Fraction in Crude			
Component **i**	Component Weight Fraction in Crude (wt%/100) Z_{Li}	Component Molecular Weight M_i	Total Moles of Crude (sum $Z_{Li}/M_i \times 1{,}000$) X_T	Component Mole Fraction in Crude ($Z_{Li}/M_i/X_T$) X_i	Crude Molecular Weight (sum $M_i \times X_i$) M_T
Methane		16			
Ethane		30			
Propane		44			
lsobutane		58			
N-Butane		58			
1,3 Butadiene		54			
lsopentane		72			
N-Pentane		72			
N-Hexane		86			
Hexane		84			
Benzene		78			
Heptanes		97			
2,2,4 Trimethylpentane		114			
Toluene		92			
Octanes		111			
Ethvl Benzene		106			
Xylenes		106			
lsopropylbenzene		120			
Nonanes		123			
Naphthalene		128			
Decanes+					
SUM Z_{Li} / X_T / X_i / M_T	1.00			1.00	

Note: Molecular weight values for component groups such as octanes are estimates from Core Laboratories.

III. Determine Component Vapor Pressure at Given Crude Temperature

Methodology Assumptions/Comments:

1. Clausius-Clapeyron equation provides relationship between temperature and vapor pressure:

$$\log P_2/P_1 = H_V/2.303R\times(T_2-T_1/T_2T_1)$$

where R = Universal Gas Constant = 8.31448 J/g-mole·K = 3.58 Btu/lb-mole·K

H_V = Heat of Vaporization = see table below

2. Let P_1 be known component vapor pressure at known temperature T_1 = 100° F (311° K), and P_2 be unknown component vapor pressure at given crude temperature T_2 (shown below).
3. Pump station crude (and vapor) constant temperature (P_2) of: °F = °K
   Based on average crude temperature at this pump station during the reporting period

Component Physical Properties			Component Vapor Pressure at Crude Temperature			
Component i	Component Vapor Pressure at 100°F (psia) P_1	Component Heat of Vaporization (Btu/lb-mole) H_V	Component Heat of Vaporization/ Gas Constant $H_V/2.303R$	Calculate $(T_2-T_1)/T_2T_1$	Calculate Inverse Log of $(H_V/2.303R)\times(T_2-T_1)/T_2T_1$	Component Vapor Pressure at Crude Temperature (psia) P_2
Methane		3520	426.9			
Ethane		6349	770.1			
Propane		8071	978.9			
lsobutane		9136	1108.2			
N-Butane		9642	1169.5			
1,3 Butadiene		10025	1215.9			
lsopentane		10613	1287.3			
N-Pentane		11082	1344.2			
N-Hexane		12404	1504.5			
Hexane		12500	1516.1			
Benzene		13215	1602.8			
Heptanes		13500	1637.4			
2,2,4 Trimethylpentane		14000	1698.1			
Toluene		14263	1730.0			
Octanes		14500	1758.7			
Ethyl Benzene		15288	1854.3			
Xylenes		16000	1940.6			
lsopropylbenzene		16136	1957.1			
Nonanes		16500	2001.3			
Naphthalene		16700	2025.5			
Decanes+		47282	5734.7			

Notes:

1. Heat of Vaporization and vapor pressure of pure components from GPSA Engineering Data Book, Volume II, Section 23.
2. Vapor Pressure values for component groups such as octanes are estimates from Core laboratories.
3. Heat of Vaporization values for component groups are estimates based on values for individual components within the group.

IV. Determine Component Partial Pressure and Mole Fraction in Crude Vapor

Methodology Assumptions/Comments:

1. Conservatively assume C_1 through C_{10} hydrocarbons and HAP's are only species present in vapor phase due to dramatic drop off in component vapor pressure as component molecular weight increases.
2. For speciation purposes, assume crude vapor pressure (P_{VA}) equal to sum of component partial pressures indicated below. This assumption ignores CO_2 present in crude and is conservative because it results in vapor mole fractions of listed components (including HAP's) being overstated.
3. Component partial pressure is equal to the component mole fraction in the liquid crude multiplied by the component vapor pressure at the given crude temperature:

$$P_i = P_2 \times X_i$$

4. The component mole fraction in the crude vapor is then equal to the component partial pressure divided by the overall crude vapor pressure:

$$Y_i = P_i/P_{VA}$$

Calculation of Component Partial Pressure and Mole Fraction in Vapor				
Component **i**	Component Vapor Pressure at Crude Temperature (psia) P_2	Component Mole Fraction in Crude ($Z_{Li}/M_i/X_T$) X_i	Component Partial Pressure at Crude Temperature ($P_2 \times X_i$) P_i	Component Mole Fraction in Vapor (P_i/P_{VA}) Y_i
Methane				
Ethane				
Propane				
lsobutane				
N-Butane				
1,3 Butadiene				
lsopentane				
N-Pentane				
N-Hexane				
Hexane				
Benzene				
Heptanes				
2,2,4 Trimethylpentane				
Toluene				
Octanes				
Ethyl Benzene				
Xylenes				
lsopropylbenzene				
Nonanes				
Naphthalene				
Decanes+				
P_{VA} / Y_i SUM				1.00

V. Determine Component Weight Fractions in Crude Vapor

1. Component weight fraction in the vapor is determined in two steps. First, the overall vapor molecular weight is determined by summing the product of the molecular weight and vapor mole fraction for each component:

$$M_V = \text{sum } (M_i \times Y_i)$$

2. Then, the component weight fraction is determined by dividing the product of the molecular weight and vapor mole fraction for each component by the overall vapor molecular weight:

$$Z_{Vi} = (M_i \times Y_i)/M_V$$

Component Physical Properties		Calculation of Component Weight Fraction in Vapor		
Component i	Component Molecular Weight M_i	Component Mole Fraction in Vapor (P_i/P_{VA}) Y_i	Calculate Vapor Molecular Weight (sum $M_i \times Y_i$) M_V	Component Weight Fraction in Vapor ($M_i * Y_i/M_V$) Z_{Vi}
Methane	16			
Ethane	30			
Propane	44			
lsobutane	58			
N-Butane	58			
1,3 Butadiene	54			
lsopentane	72			
N-Pentane	72			
N-Hexane	86			
Hexane	84			
Benzene	78			
Heptanes	97			
2,2,4 Trimethylpentane	114			
Toluene	92			
Octanes	111			
Ethyl Benzene	106			
Xylenes	106			
lsopropylbenzene	120			
Nonanes	123			
Naphthalene	128			
Decanes+				
Y_i SUM / M_V / Z_{Vi} SUM		1.00		1.00

Estimated Actual HAP Emissions - Breakout Tank
Pump Station 5

1. The total organic compound (TOC) emissions (losses) are determined from EPA's TANKS 4.0 Program. Individual component emission rates (losses) are then determined using the vapor phase weight fractions previously determined for each component.

$$L_{Ti} = (Z_{Vi})(L_T)$$

2. Based on an actual flow of crude to the breakout tank of: _____ bbl/yr
_____ gal/yr

The total TOC losses from the breakout tank are: _____ lb/yr
_____ tpy

Calculation of Component Emission Rates (Losses)				
Component i	Component Weight Fraction in Vapor Z_{Vi}	TOC Losses (from TANKS) L_T	Component Emission Rate/Loss L_{Ti}	Total HAP Emission Rate/Losses L_{HAP}
Methane				N/A
Ethane				N/A
Propane				N/A
lsobutane				N/A
N-Butane				N/A
1,3 Butadiene				
lsopentane				N/A
N-Pentane				N/A
N-Hexane				
Hexane				N/A
Benzene				
Heptanes				N/A
2,2,4 Trimethylpentane				
Toluene				
Octanes				N/A
Ethyl Benzene				
Xylenes				
lsopropylbenzene				
Nonanes				N/A
Naphthalene				
Decanes+				N/A
L_{Ti} SUM / L_{HAP} SUM				

Section 12. Visible Emissions Forms

VISIBLE EMISSION OBSERVATION FORM

This form is designed to be used in conjunction with EPA Method 9, "Visual Determination of the Opacity of Emissions form Stationary Sources." Temporal changes in emission color, plume water droplet content, background color, sky conditions, observer position, etc. should be noted in the comments section adjacent to each minute of readings. Any information not dealt with elsewhere on the form should be noted under additional information. Following are brief descriptions of the type of information that needs to be entered on the form: for a more detailed discussion of each part of the form, refer to "Instructions for Use of Visible Emission Observation Form."

- Source Name: full company name, parent company or division or subsidiary information, if necessary.
- Address: street (not mailing or home office) address of facility where VE observation is being made.
- Phone (Key Contact): number for appropriate contact.
- Stationary Source ID Number: number from NEDS, agency file, etc.
- Process Equipment, Operating Mode: brief description of process equipment (include type of facility) and operating rate, % capacity, and/or mode (e.g. charging, tapping, shutdown).
- Control Equipment, Operating Mode: specify type of control device(s) and % utilization, control efficiency.
- Describe Emission Point: for identification purposes, stack or emission point appearance, location, and geometry; and whether emissions are confined (have a specifically designed outlet) or unconfined (fugitive).
- Height Above Ground Level: stack or emission point height relative to ground level; can use engineering drawings, Abney level, or clinometer.
- Height Relative to Observer: indicate height of emission point relative to the observation point.
- Distance from Observer: distance to emission point; can use rangefinder or map.
- Direction from Observer: direction plume is traveling from observer.
- Describe Emissions and Color: include physical characteristics, plume behavior (e.g., looping, lacy, condensing, fumigating, secondary particle formation, distance plume visible, etc.), and color of emissions (gray, brown, white, red, black, etc.). Note color changes in comments section.
- Visible Water Vapor Present?: check "yes" if visible water vapor is present.
- If Present, is Plume…: check "attached" if water droplet plume forms prior to exiting stack, and "detached" if water droplet plume forms after exiting stack.
- Point in Plume at Which Opacity was Determined: describe physical location in plume where readings were made (e.g., 1 ft above stack exit or 10 ft. after dissipation of water plume).
- Describe Plume Background: object plume is read against, include texture and atmospheric conditions (e.g., hazy).
- Background Color: sky blue, gray-white, new leaf green, etc.
- Sky Conditions: indicate cloud cover by percentage or by description (clear, scattered, broken, overcast).
- Wind Speed: record wind speed; can use Beaufort wind scale or hand-held anemometer to estimate.
- Wind Direction From: direction from which wind is blowing; can use compass to estimate to eight points.
- Ambient Temperature: in degrees Fahrenheit or Celsius.

  Wet Bulb Temperature: can be measured using a sling psychrometer

  RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
- Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.

  Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.

  Sun's Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen's shadow crosses the observer's position.
- Observation Date: date observations conducted.
- Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
- Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.

  Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.

  Range of Opacity: note highest and lowest opacity number.
- Observer's Name: print in full.

  Observer's Signature, Date: sign and date after performing VE observation.
- Organization: observer's employer.

Certified By, Date: name of "smoke school" certifying observer and date of most recent certification.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR PERMITS PROGRAM - VISIBLE EMISSIONS OBSERVATION FORM

Page No._____

Stationary Source Name		Type of Emission Unit		Observation Date		Start Time			End Time
				Sec / Min	0	15	30	45	Comments
Emission Unit Location				1					
City	State	Zip		2					
Phone # (Key Contact)		Stationary Source ID Number		3					
Process Equipment		Operating Mode		4					
Control Equipment		Operating Mode		5					
Describe Emission Point/Location				6					
Height above ground level	Height relative to observer	Clinometer Reading		7					
Distance From Observer Start / End		Direction From Observer Start / End		8					
Describe Emissions & Color Start / End				9					
Visible Water Vapor Present? If yes, determine approximate distance from the No / Yes stack exit to where the plume was read				10					
Point in Plume at Which Opacity Was Determined				11					
Describe Plume Background		Background Color Start / End		12					
				13					
Sky Conditions: Start / End				14					
Wind Speed Start / End		Wind Direction From Start / End		15					
Ambient Temperature		Wet Bulb Temp	RH percent	16					
SOURCE LAYOUT SKETCH: 1 Stack or Point Being Read 2 Wind Direction From 3 Observer Location 4 Sun Location 5 North Arrow 6 Other Stacks				17					
				18					
				19					
				20					
				21					
				22					
				23					
				24					
				25					
				26					
				27					
				28					
				29					
				30					
				Range of Opacity					
				Minimum			Maximum		
I have received a copy of these opacity observations				Print Observer's Name					
Print Name:				Observer's Signature					Date
Signature:									Observer's Affiliation:
Title		Date		Certifying Organization					
				Certified By:				Date	

Data Reduction:

Duration of Observation Period (minutes):	Duration Required by Permit (minutes):
Number of Observations:	Highest Six–Minute Average Opacity (%):
Number of Observations exceeding 20%:	
In compliance with six-minute opacity limit? (Yes or No)	Highest 18-Consecutive –Minute Average Opacity (%)(engines and turbines only)

Average Opacity Summary:

Set Number	Time			Opacity		
	Start	End		Sum	Average	Comments

Section 13. Material Balance Calculation

If the sulfur content of a fuel shipment is greater than 0.75 percent by weight, calculate the three-hour exhaust concentration of SO_2 using the following equations:

A. = 31,200 x [**wt%S_{fuel}**] = 31,200 x _____ = _____

B. = 0.148 x [**wt%S_{fuel}**] = 0.148 x _____ = _____

C. = 0.396 x [**wt%C_{fuel}**] = 0.396 x _____ = _____

D. = 0.933 x [**wt%H_{fuel}**] = 0.933 x _____ = _____

E. = B + C + D = _____ + _____ + _____ = _____

F. = 21 – [**vol%$_{dry}$O2, $_{exhaust}$**] = 21 - _____ = _____

G. = [**vol%$_{dry}$O2, $_{exhaust}$**] ÷ F = _____ ÷ _____ = _____

H. = 1 + G = 1 + _____ = _____

I. = E x H = _____ x _____ = _____

SO_2 concentration = A ÷ I = _____ ÷ _____ = _____ ppm

The wt%S_{fuel}, wt%C_{fuel}, and wt%H_{fuel} are equal to the weight percent's of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to Condition 12.2. The fuel weight percent's of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (vol%$_{dry}O_2$, exhaust) is obtained from oxygen meters, manufacturer's data, or from the most recent ORSAT analysis at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if wt%S_{fuel}l = 1.0%, then enter 1.0 into the equations not 0.01 and if vol%$_{dry}O_2$, exhaust = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.346(c)]

Section 14. ADEC Notification Form[11]

Trans Alaska Pipeline System (TAPS) Pump Station 5 (PS-5)	AQ0098TVP03
Stationary Source Name	**Air Quality Permit No.**
Alyeska Pipeline Service Company	
Company Name	**Date**

When did you discover the Excess Emissions/Permit Deviation?

Date: _____ / _____ / _____ Time: _____ :/ _____

When did the event/deviation occur?

Begin Date: _____ / _____ / _____ Time: _____ : _____ (Use 24-hr clock.)

End Date _____ / _____ / _____ Time: _____ : _____ (Use 24-hr clock.)

What was the duration of the event/deviation? _____ : _____ (hrs:min) or _____ days

(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for Notification: (please check only 1 box and go to the corresponding section)

☐ Excess Emissions – Complete Section 1 and Certify

☐ Deviation from Permit Condition – Complete Section 2 and Certify

☐ Deviations from COBC, CO, or Settlement Agreement – Complete Section 2 and Certify

Section 1. Excess Emissions

(a) Was the exceedance: ☐ Intermittent or ☐ Continuous

(b) Cause of Event (Check one that applies):

☐ Start Up/Shut Down ☐ Natural Cause (weather/earthquake/flood)

☐ Control Equipment Failure ☐ Schedule Maintenance/Equipment Adjustment

☐ Bad Fuel/Coal/Gas ☐ Upset Condition ☐ Other _____

(c) Description
Describe briefly, what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emissions Units Involved:
Identify the emission unit involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

EU ID	EU Name	Permit Condition Exceeded/Limit/Potential Exceedance

[11] 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 only one box, corresponding with the section in the permit):

☐ Emission Unit-Specific

☐ Failure to Monitor/Report

☐ General Source Test/Monitoring Requirements

☐ Recording/Reporting/Compliance Certification

☐ Standard Conditions Not Included in the Permit

☐ Other Section: _____ (Title of section and section number of your permit).

☐ Generally Applicable Requirements

☐ Reporting/Monitoring for Diesel Engines

☐ Recordkeeping Failure

☐ Insignificant Emission Unit

☐ Stationary Source Wide

(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.

EU ID	EU Name	Permit Condition/ Potential Deviation

(c) Description of Potential Deviation:
Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(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:

Fax to: 907-451-2187

Or

Email to: DEC.AQ.Airreports@alaska.gov

If faxed or emailed, the report must be certified within the Operating Report required for the same reporting period per Condition 63.

Or

Mail to: ADEC
Air Permits Program
610 University Avenue
Fairbanks, AK 99709-3643

Or

Phone Notification: 907-451-5173

Phone notifications require a written follow-up report.

Or

Submission of information contained in this report can be made electronically at the following website:

https://myalaska.state.ak.us/dec/air/airtoolsweb/

If submitted online, report must be submitted by an authorized E-Signer for the stationary source.

[18 AAC 50.346(b)(3)]

Section 15. Emission Inventory Form

ADEC Reporting Form Emission Inventory Reporting State of Alaska Department of Environmental Conservation Division of Air Quality	Emission Inventory Year- [ ]

Mandatory information is highlighted. Make additional copies as needed.

Inventory start date:	
Inventory end date:	
Inventory Type:	

Facility Information:

ADEC Stationary Source ID:	
(Stationary Source) Facility Name:	
AFS ID:	
Census Area/ Community:	
Line of Business (NAICS):	
Contact/Owner Name:	
Contact Owner Address:	
Contact/Owner Phone Number:	
Facility Physical Address:	
	Lat: Long:
Mailing Address :	

Emission Unit:

ID:	
Description:	
Manufacturer:	
Model Number:	
Serial Number:	
Year of Manufacture:	

Maximum Nameplate Capacity:	
Design Capacity (BTU/hr):	
Control Equipment (List All):	
	Control Equipment Type(Primary or Secondary):
	ID:
	Type:
	Manufacturer:
	Model:
	Control Efficiency (%):
	Capture Efficiency (%):
	Total Capture Efficiency (%):
	Pollutants Controlled
	-

Processes (List All):	
	PROCESS:
	SCC Code:
	Material Processed:
	Operational Periods:
	FUEL INFORMATION
	Ash Content (weight %):
	Elem. Sulfur Content (weight %):
	H2S Sulfur Content (ppmv):
	Heat Content (MMBtu/1000 gal or MMBtu/MMscf):
	Heat Input (MMBtu/hr):
	Heat Output (MMBtu/hr):
	THROUGHPUT
	Total Amount:
	Summer %:
	Fall %:
	Winter %:

	Spring %:
	Days/Week of Operation:
	Weeks/Year of Operation:
	Hours/Day of Operation:
	Hours/Year of Operation:

EMISSIONS					
Pollutant	**Emission Factor**	**Emission Factor Numerator**	**Emission Factor Denominator**	**Emission Factor Source**	**Tons Emitted**
CO					
NH3					
NOX					
PM10-PRI					
PM25-PRI					
SO2					
VOC					
Lead and lead compounds					

Stack Description:	
	Stack Detail:
	ID:
	Type:
	Measurement Units:
	Base Elevation:
	Stack Height:
	Stack Diameter:
	Exit Gas Temp:
	Exit Gas Velocity:
	Actual Exit Gas Flow Rate:
	Data Source:
	Description:

	Latitude:
	Longitude:
	Location Description:
	Accuracy (m):
	Datum:

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name:_____Title_____Date _____

Signature:_____ Phone number_____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j)*

To Submit this report:

1. Fax this form to: 907-465-5129; or
2. E-mail to: DEC.AQ.airreports@alaska.gov; or
3. Mail to: ADEC
   Air Permits Program
   410 Willoughby Ave., Suite 303
   PO Box 111800
   Juneau, AK 99801-1800

Or

4. Submission of information can be made via a full electronic batch submittal (XML files). This will require each data element to be tagged with XML (Extensible Markup Language) code before it can be uploaded to ADEC database.
   https://myalaska.state.ak.us/dec/air/airtoolsweb/EiXmlValidator.aspx

[18 AAC 50.346(b)(9)]