DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY OPERATING PERMIT

Permit No. AQ0072TVP04 Public Comment Date: September 14, 2021
Expiration Date: Five Years

The Alaska Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Alyeska Pipeline Service Company**, for the operation of the **Pump Station 1 (PS-1)**.

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

All currently applicable stationary source-specific terms and conditions of Air Quality Control Permit to Operate No. 9572-AC021, Construction Permit No. AQ0072CPT02, and Minor Permit No. AQ0072MSS03, have been incorporated into this operating permit.

Upon effective date of this permit, Operating Permit No. AQ0072TVP03 Rev. 2 expires.

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

James R. Plosay, Manager
Air Permits Program

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Abbreviations and Acronyms

AAC.....Alaska Administrative Code
ADEC .....Alaska Department of Environmental Conservation
Administrator.....EPA and the Department.
APSC .....Alyeska Pipeline Service Company
AS .....Alaska Statutes
ASTM .....American Society for Testing and Materials
BACT .....best available control technology
bHp .....brake horsepower
Btu/scf .....British thermal units per standard cubic feet
CAM .....Compliance Assurance Monitoring
CDX.....Central Data Exchange
CEDRI .....Compliance and Emissions Data Reporting Interface
C.F.R. .....Code of Federal Regulations
CAA or The Act .Clean Air Act
CO .....carbon monoxide
CO_2e .....CO_2-equivalent
Department .....Alaska Department of Environmental Conservation
dscf .....dry standard cubic foot
EPA .....US Environmental Protection Agency
EU.....emissions unit
°F .....Degree Fahrenheit
GHG .....Greenhouse Gas
gr/dscf.....grain per dry standard cubic foot (1 pound = 7000 grains)
GPA .....Gas Producers Association
gph or gal/hr .....gallons per hour
H_2S.....Hydrogen Sulfide
HAPs .....hazardous air pollutants [as defined in AS 46.14.990]
Hp .....horsepower
ID.....emissions unit identification number
ISO.....International Standard Organization
kJ/kW-hr.....Kilojoules per kilowatt-hour
kPa .....kiloPascals
kW .....kilowatts
LAER.....lowest achievable emission rate
LHV.....Lower Heating Value
lb.....Pounds
lb/MMBtu .....Pounds per million Btu
lb/MWh.....Pounds per megawatt-hour
lb/yr .....Pounds per year
MACT .....maximum achievable control technology [as defined in 40 C.F.R. 63]
MMBtu/hr.....million BTUs per hour
MMscf .....million standard cubic feet
MR&R.....monitoring, recordkeeping, and
MMscf .....million standard cubic feet
MR&R.....monitoring, recordkeeping, and reporting
NAICS.....North American Industrial Classification System
NESHAPs .....National Emission Standards for Hazardous Air Pollutants [as contained in 40 C.F.R. 61 and 63]
NH_3 .....ammonia
NO_X.....nitrogen oxides
NSPS .....New Source Performance Standards [as contained in 40 C.F.R. 60]
O & M.....operation and maintenance
O_2 .....oxygen
PAL .....plantwide applicability limitation
Pb .....lead
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
RICE .....Reciprocating Internal Combustion Engine
scf.....standard cubic feet
SIC. .....Standard Industrial Classification
SIP.....State Implementation Plan
SPC .....Standard Permit Condition or Standard Operating Permit Condition
SO_2 .....sulfur dioxide
TAPS.....Tans-Alaska Pipeline System
tph .....tons per hour
TPY .....tons per year
VOC .....volatile organic compound [as defined in 40 C.F.R. 51.100(s)]
VOL .....volatile organic liquid [as defined in 40 C.F.R. 60.111b, Subpart Kb]
vol% .....volume percent
wt% .....weight percent
$wt\%S_{fuel}$ .....weight percent of sulfur in fuel

Section 1. Stationary Source Information

Identification

Permittee:		**Alyeska Pipeline Service Company** P. O. Box 196660 Anchorage, AK 99519-6660
Stationary Source Name:		**Pump Station 1 (PS-1)**
Location:		Latitude 70.2572º North; Longitude 148.6178º West
Physical Address:		T11N, R14E, Umiat Meridian Deadhorse, Alaska
Owner:		Harvest Alaska, LLC ConocoPhillips Transportation (Alaska), Inc. ExxonMobil Pipeline Company
Operator:		**Alyeska Pipeline Service Company** P. O. Box 196660 Anchorage, AK 99519-6660
Permittee's Responsible Official:		Hillary Schaefer, Pipeline Director Alyeska Pipeline Service Company P. O. Box 60469, MS830 Fairbanks, AK 99706 Phone: 907-450-7746 Email: Hillary.Schaefer@alayeska-pipeline.com
Designated Agent:		CT Corporation 9360 Glacier Highway, Suite 202 Juneau, AK 99801
Stationary Source and Building Contact:		Jenna Miller/Monte Geerdes, PS-1 Operations & Maintenance Supervisor APSC, P. O. Box 196660, MS 507 Anchorage, AK 99519-6660 (907) 787-4102
Fee Contact:		Cindy Keuler, Environmental Program Coordinator Alyeska Pipeline Service Company P. O. Box 196660, MS 507 Anchorage, AK 99519-6660 (907) 787-8975, Email: Cindy.Keuler@alyeska-pipeline.com
Permit Contact:		Don Mark Anthony, Air Quality SME APSC, P. O. Box 196660, MS 507 Anchorage, AK 99519-6660 (907) 787-8568, Email: markanthonydt@alyeska-pipeline.com
Process Description:	SIC Code	4612 – Crude Petroleum Pipelines
	NAICS Code:	486110 – 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. Emissions Unit Inventory and Description

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

Table A - Emissions Unit Inventory[1]

EU ID	Tag No.	Emissions Unit Description	Fuel	Rating/Size	Commence Construction[2]
4	31-G-4A	Solar Turbine Electric Generator PK Model #CSE-1000	Diesel	800 kW	Pre-1980
6[3,4]	31-C-10-1802T	Solar Turbine Gas Compressor PK Model #CS-1200	Natural Gas	1,135 hp	1984
7[3,4]	31-C-10-1803T	Solar Turbine Gas Compressor PK Model #CS-1200	Natural Gas	1,135 hp	1984
16	31-H-1A	Eclipse Therminol Heater 1000-5 HCLT Design	Natural Gas / Diesel	20.6 MMBtu/hr	Pre-1980
17	31-H-1B	Eclipse Therminol Heater 1000-5 HCLT Design	Natural Gas / Diesel	20.6 MMBtu/hr	Pre-1980
18	31-H-1C	Eclipse Therminol Heat 1000-5 HCLT Design	Natural Gas / Diesel	20.6 MMBtu/hr	Pre-1980
19	31-H-10-1401	Broach Heater	Natural Gas / Diesel	3.0 MMBtu/hr	1984
20	N-855F	Cummins Firewater Pump Engine	Diesel	215 hp	Pre-1980
22[5]	31-FS-1	John Zink Crude Oil Tank Vapor Flare	Natural Gas / Vapors	33,000 scf/hr (purge) 456 scf/hr (pilot)	Modified 1995
23	31-PK-3601R	Siemens Cyclone Turbine PK Model #SGT-400	Natural Gas	12.9 MW ISO	2005
25a	31-GEN-3701R	Rolls Royce 501-KB7 Turbine	Natural Gas	5.2 MWe ISO	2012
26	31-GEN-4605R	UPS Backup Generator PK Model #PPJD65MOD-1	Diesel	65 kW	2005
27	NA	Crude Oil Tank 110	NA	210,000 bbl	Pre-1978
28	NA	Crude Oil Tank 111	NA	210,000 bbl	Pre-1978

Notes:

1. EU IDs 1 – 3, 5, and 8 through 15 were decommissioned as part of the Electrification and Automation Project. EU ID 21 (Solid Waste Incinerator, 31-IN-1) has been permanently shut down and removed.
2. Commence construction is defined by 40 C.F.R. 52.21(b) & (i) and 40 C.F.R. 60.2.
3. EU IDs 6 and 7 were constructed in 1983 and were installed at the stationary source in 1984.
4. The Permittee has a family of turbine engines that are rotated in and out of operation for EU IDs 4, 6, and 7 as dictated by maintenance. Two Solar turbine engines, Serial Nos. 0753S21 or 0756S21, may be rotated in or out of EU IDs 6 and 7 during routine swapping of turbine engines. These turbine engines, manufactured in 1983, are subject to the applicable NSPS 40 C.F.R. 60, Subpart A and GG requirements when located at the stationary source.
5. EU ID 22 is a control device for EU IDs 27 and 28, the Crude Oil Tanks 110 and 111.

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

Section 3. State Requirements

Visible Emissions Standard

1. **Industrial Process and Fuel-Burning Equipment Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU IDs 4, 6, 7, 16 – 20, 22, 23, 25a, and 26 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)(4), 50.055(a)(1), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(1)]

1.1. For EU ID 26, as long as the emissions unit does not exceed the limit in Condition 21, monitoring shall consist of an annual compliance certification under Condition 79 for the visible emissions standard based on reasonable inquiry. Otherwise comply with Condition 1.2.

1.2. For EU IDs 4 and 20, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e) during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 79 for the visible emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 78 if any of EU IDs 4, 20, or 26 reaches any of the significant emissions thresholds listed in 18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 2 through 4 for the remainder of the permit term for that emissions unit.

1.3. For EU IDs 16 – 19, burn gas as the primary fuel. Monitoring for these emissions units shall consist of a statement in each operating report under Condition 78 indicating whether each of these emissions units burned gas as the primary fuel during the period covered by the report. If any of these units operated on a back-up liquid fuel during the period covered by the report, the Permittee shall monitor, record, and report in accordance with Condition 13 for that emissions unit.

1.4. For EU IDs 6, 7, 23, and 25a, burn only gas as fuel. Monitoring for these emissions units shall consist of a statement in each operating report under Condition 78 indicating whether each of these emissions units burned only gas during the period covered by the report. Report under Condition 77 if any fuel other than gas is burned.

1.5. For EU ID 22 monitor, record and report in accordance with Condition 5.

[18 AAC 50.040(j)(4), 50.326(j)(3) & (4), & 50.346(c)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]

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

Liquid Fuel-Burning Equipment, EU IDs 4, 20, and 26

2. Visible Emissions Monitoring. When required by any of Conditions 1.1 or 1.2, or in the event of replacement[1] during the permit term, the Permittee shall observe the exhaust of EU IDs 4, 20, and 26 for visible emissions using the Method 9 Plan under Condition 2.1.

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

2.2. **Method 9 Plan.** For all observations in this plan, observe emissions unit exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations.[2]

a. First Method 9 Observation. Observe the exhausts of EU IDs 4, 20, and 26 according to the following criteria:

(i) For any unit replaced, observe exhaust within 60 days of the newly installed emissions unit becoming fully operational.[3] Except as provided in Condition 2.2.e, after the First Method 9 observation:

(ii) For each of EU IDs 4, 20, and 26, observe the exhaust of the emissions unit within 30 days after the end of the calendar month during which monitoring was triggered under Condition 1.2; or for an emissions unit with intermittent operations, within the first 30 days during the unit's next scheduled operation.

b. Monthly Method 9 Observations. After the first Method 9 observation conducted under Condition 2.2.a, perform observations at least once in each calendar month that the emissions unit operates.

c. Semiannual Method 9 Observations. After at least three monthly observations under Condition 2.2.b, unless a six-consecutive-minute average opacity is greater than 15 percent and one or more individual observations are greater than 20 percent, perform semiannual observations

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

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

[1] *"Replacement,"* as defined in 40 C.F.R. 51.166(b)(32).
[2] Visible emissions observations are not required during emergency operations.
[3] "*Fully operational*" means upon completion of all functionality checks and commissioning after unit installation. "*Installation*" is complete when the unit is ready for functionality checks to begin.

d. Annual Method 9 Observations. After at least two semiannual observations under Condition 2.2.c, unless a six-consecutive-minute average opacity is greater than 15 percent and one or more individual observations are greater than 20 percent, perform annual observations

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

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

e. Increased Method 9 Frequency. If a six-consecutive-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more individual observations are greater than 20 percent, then increase or maintain the observation frequency for that emissions unit to at least monthly intervals as described in Condition 2.2.b, and continue monitoring in accordance with the Method 9 Plan.

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

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

3.1. For all Method 9 observations,

a. the observer shall record the following:

(i) the name of the stationary source, emissions unit and location, emissions unit type, observer's name and affiliation, and the date on the Visible Emissions Observation Form in Section 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 rate (load or fuel consumption rate or best estimate, if unknown) on the sheet at the time opacity observations are initiated and completed;

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

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

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

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

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

(iv) record the average opacity on the sheet.

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

3.2. The records required by Condition 3.1 may be kept in electronic format.

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

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

4.1. Include in each operating report required under Condition 78 for the period covered by the report:

a. for all Method 9 Plan observations:

(i) copies of the observation results (i.e. opacity observations) for each emissions unit, except for the observations the Permittee has already supplied to the Department; and

(ii) a summary to include:

(A) number of days observations were made;

(B) highest six-consecutive- and 18-consecutive-minute average opacities observed; and

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

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

4.2. Report under Condition 77:

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

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

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

Flare (EU ID 22)

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

5.1. Observe flare events[4] on EU ID 22, for visible emissions following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations according to the following schedule:

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

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

5.2. Record the following information for observed events:

a. the flare EU ID number;

b. results of the Method-9 observations;

c. reason for flaring;

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

e. volume of gas flared.

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

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

5.5. Include the following in the operating report required by Condition 78 for the period covered by the report:

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

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

5.6. Report under Condition 77

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

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

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

5.7. If no flare events are monitored during a certification period, the Permittee shall certify compliance under Condition 79 with the visible emissions standard in Condition 1 based on reasonable inquiry.

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

Particulate Matter (PM) Emissions Standard

6. **Industrial Process and Fuel-Burning Equipment PM Emissions.** The Permittee shall not cause or allow particulate matter emitted from EU IDs 4, 6, 7, 16 – 20, 22, 23, 25a, and 26 listed in Table A to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(1)]

6.1. For EU ID 26, as long as the emissions unit does not exceed the limits in Condition 21, monitoring shall consist of an annual compliance certification under Condition 79 for the PM emissions standard based on reasonable inquiry. Otherwise, comply with Condition 6.2.

6.2. For EU IDs 4 and 20, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e) during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 79 for the PM emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 78 if any of EU IDs 4, 20, or 26 reaches any of the significant emissions thresholds and monitor, record and report in accordance with Conditions 7 through 9 for the remainder of the permit term for that emissions unit.

6.3. For EUs 16 – 19, the Permittee shall comply with Condition 1.3.

6.4. For EU IDs 6, 7, 23, and 25a, the Permittee shall comply with Condition 1.4.

6.5. For EU ID 22, the Permittee shall comply with Condition 5.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]

PM MR&R

Liquid Fuel-burning Engines and Turbines (EU IDs 4, 20, and 26)

7. **PM Monitoring.** The Permittee shall conduct source tests on EU IDs 4, 20, and 26 (when required by Condition 6.2), to determine the concentration of PM in the exhaust of each emissions unit as follows:

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

7.1. If the result of any Method 9 observation for any of EU IDs 4, 20, or 26 is greater than the criteria of Condition 7.2.a or Condition 7.2.b, or if the Method 9 observation conducted under Condition 13.3 for EU IDs 16 – 19 exceeds the standard in Condition 1, the Permittee shall, within six months of that Method 9 observation, either:

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

b. except as exempted in Condition 7.4, conduct a PM source test according to requirements set out in Section 6.

7.2. Take corrective action or conduct a PM source test, in accordance with Condition 7.1, if any Method 9 observation under Condition 2.1 results in an 18-minute average opacity greater than

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

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

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

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

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

b. corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 2.1) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 7.2.

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

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

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

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

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

9.2. In each operating report under Condition 78, include:

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

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

9.3. Report in accordance with Condition 77

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

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

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

Liquid Fuel-Burning Boilers and Heaters (EU IDs 16 – 19)

10. PM Monitoring. The Permittee shall conduct source tests on EU IDs 16 – 19 (when required by Condition 13.2), to determine the concentration of PM in the exhaust of each emissions unit as follows:

10.1. If the result of any Method 9 observation for any of EU IDs 16 – 19 results in an 18-minute average opacity greater than 20 percent opacity, the Permittee shall, within six months of that Method 9 observation, either:

a. take corrective action and observe the emissions unit exhaust under load conditions comparable to those when the criteria were exceeded, following 40 C.F.R. 60, Appendix A-4 Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations, to show that emissions are no longer greater than an 18-minute average opacity of 20 percent; or

b. except as exempted under Condition 10.3, conduct a PM source test according to the requirements in Section 6.

10.2. During each one-hour PM source test run under Condition 10.1, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive-minute average opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.

10.3. The PM source test requirement in Condition 10.1 is waived for an emissions unit if:

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

b. corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 2.1) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 10.1.

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

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

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

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

12.1. Notify the Department of any Method 9 observation results that are greater than the threshold of Condition 10.1 within 30 days of the end of the month in which the observations occurred. Include the dates, EU IDs, and results when an observed 18-minute average opacity was greater than the threshold in Condition 10.1.

12.2. In each operating report required by Condition 78, include:

a. a summary of the results of any source test and visible emissions observations conducted under Condition 10; and

b. copies of any visible emissions observation results greater than the threshold in Condition 10.1, if they were not already submitted.

12.3. Report in accordance with Condition 77 any time the results of a source test exceed the PM emission standard in Condition 6.

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

Visible Emissions & PM MR&R

Dual Fuel-Burning Emissions Units (EU IDs 16 – 19)

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

13.1. For any of EU IDs 16 – 19 that does not exceed 400 hours of operations per calendar year on a back-up liquid fuel, monitoring of compliance for visible emissions and PM shall consist of an annual certification under Condition 79 based on reasonable inquiry.

13.2. For any of EU IDs 16 – 19, notify the Department and begin monitoring the affected emissions unit in accordance with Condition 13.3 no later than 15 days after the end of a calendar month in which the cumulative hours of operation for the calendar year exceed any multiple of 400 hours on a back-up liquid fuel; or for an emissions unit with intermittent back-up fuel use, during the next scheduled operation on back-up liquid fuel.

13.3. When required to do so by Condition 13.2, observe the emissions unit exhaust, following 40 C.F.R. 60, Appendix A-4 Method 9, for 18 minutes to obtain 72 consecutive 15-second opacity observations.

a. If the observation exceeds the standard in Condition 1, monitor as described in Condition 10.

b. If the observation does not exceed the standard in Condition 1, no additional monitoring is required until the cumulative hours of operation exceed each subsequent multiple of 400 hours on back-up liquid fuel during a calendar year.[5]

13.4. Keep records and report in accordance with Conditions 11 and 12 as applicable.

13.5. Report under Condition 77 if the Permittee fails to comply with Conditions 13.2, 13.3, or 13.4.

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

Sulfur Compound Emissions Standard

14. Sulfur Compound Emissions. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from EU IDs 4, 6, 7, 16 – 20, 22, 23, 25a, and 26 to exceed 500 ppm averaged over three hours.

[18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(1)]

Sulfur Compound MR&R

Fuel Oil[6](EU IDs 4, 16 – 20, and 26)

15. Sulfur Compound Monitoring, Recordkeeping, and Reporting. The Permittee shall monitor, record, and report sulfur content in fuel oil according to Conditions 22.2.a through 22.2.d.

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

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

[6] *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.

Fuel Gas (EU IDs 6, 7, 16 – 19, 22, 23, and 25a)

16. Sulfur Compound Monitoring Recordkeeping, and Reporting. The Permittee shall monitor, record, and report sulfur content in fuel gas according to Conditions 22.1.a through 22.1.d.

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

Preconstruction Permit [7] Requirements

Owner Requested Limits to Avoid PSD Review

17. Eclipse Heater (EU IDs 16 – 18) Fuel Consumption and Hourly Limits.

17.1. The Permittee shall not allow EU IDs 16 – 18 to exceed a combined total operating limit of 1,500 hours of operation per 12-month period on liquid fuel.

17.2. Keep monthly records of each unit's operating hours on liquid fuel.

17.3. Report in the stationary source operating report required by Condition 78 the combined total hours of operation on liquid fuel for EU IDs 16 – 18 per rolling 12-month period for each month of the reporting period.

17.4. Report in accordance with Condition 77, any exceedance of the operating hour limit in Condition 17.1.

[Permit-to-Operate No 9572-AA012 Amendment 4, 12/4/1998]
[18 AAC 50.040(j); 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)]

18. Broach Heater (EU ID 19) Hourly Limit. The Permittee shall not allow EU ID 19 to exceed an operating limit of 500 hours per 12-month period on liquid fuel.

18.1. Keep monthly records of the operating hours.

18.2. Report in the stationary source operating report required by Condition 78, the total hours of operation on liquid fuel for EU ID 19 per rolling 12-month period for each month of the reporting period.

18.3. Report in accordance with Condition 77, any exceedance of the hourly limit in Condition 18.

[Permit-to-Operate 9572-AA012 Amendment 4, 12/4/1998]
[18 AAC 50.040(j), 7/25/08; 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)]

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

Owner Requested Limits to Avoid Classification as a HAP Major

19. Flare (EU ID 22) Owner Requested Limits (ORLs). To avoid classification as a hazardous air pollutant (HAP) Major Stationary Source under 18 AAC 50.316, the Permittee shall limit the HAP emissions from the flare (EU ID 22), to no more than 7.1 TPY for any individual HAP and 13.4 TPY for the aggregate total of HAPs.

19.1. **Monitoring and Recordkeeping**. The Permittee shall monitor compliance with Condition 19 as follows:

a. Sample the fuel gas stream once every two calendar years.

b. Sample the discharge crude stream at PS-1 once every twelve calendar months.[8]

(i) Sampling under Condition 19.1.b is not required if the Permittee is satisfying the crude oil sampling requirements for HAP ORLs at another TAPS pump station.

c. Determine the amounts of 1,3 butadiene, N-hexane, benzene, 2,2,4 trimethylpentane, toluene, ethyl benzene, xylenes, isopropyl benzene, and naphthalene in the crude oil and fuel gas.

(i) The Permittee shall analyze,

(A) the discharge crude stream samples using ASTM Method D-5134M, and

(B) the fuel gas stream samples using Methods ASTM 1945 and GPA 2172-96.

d. Monitor and record the total flow (as mass or volume) of the crude vapors routed to the flare using a flow meter or a combination of meters at least once each day.

e. Monitor and record the total flow (as mass or volume) of fuel gas routed to the flare using a flow meter or a combination of meters at least at least once each day.

f. For any period during which a crude vapor or fuel gas flow meter is inoperative, the Permittee shall estimate the flow rate of crude vapors and/or fuel gas to the flare prorated over the inoperative time period using a

(i) crude vapor flow rate of 31,500,000 pounds per year (lb/yr); or

(ii) a fuel gas flow rate of 30,000,000 lb/yr.

g. Calculate the 12-month rolling total HAP emissions from the flare for each calendar month as follows:

[8] The Permittee has satisfied the quarterly and semi-annual sampling requirements of Construction Permit No. AQ0072CPT02.

(i) Use the most recent crude and fuel gas composition analysis in Condition 19.1.c, and the total volume of crude vapor and fuel gas combusted in the flare for the month determined from Condition 19.1.d, 19.1.e, and 19.1.f.

(ii) Use the methodology presented in the Permittee's October 2003 permit application as described in Section 11.

(iii) Perform and record the calculations for the six calendar months at the time the semi-annual operating reports are due under Condition 78 for the six calendar months covered in the operating report.

(iv) If the most recent calculations under Condition 19.1.g(iii) show HAP emissions exceed 50% of either limit under Condition 19, for any 12-month rolling period, perform and record the calculations for each calendar month no later than 30 days after the end of the month.

(v) After performing six months of calculations under Condition 19.1.g(iv) and showing HAP emissions less than 50% of each limit in Condition 19, the Permittee shall perform calculations semi-annually at the time the operating reports are due.

h. If the calculated HAP emissions under Condition 19.1.g exceed 90% of either of the limits in Condition 19,

(i) Within 4 months of discovery, initiate and complete a validation demonstration of predicting crude vapor HAP content from crude oil sampling by comparing HAP emissions derived using Gas Producers Association *Standard 2286-95 Tentative Method of Extended Analysis for Natural Gas and Similar Gaseous Mixtures by Temperature Programmed Gas Chromatography* on the headspace of any one of the breakout tanks at Pump Stations 3, 4, 5, 7 or 9 to calculations based on sampling of PS-1 crude discharge stream;

(ii) For headspace sampling, take four samples of the tank headspace, consecutively, and if possible take all on the same day; and

(iii) For crude oil sampling, take at least two crude oil discharge samples at PS-1, within 15 days of headspace sampling;

(iv) Use the average results of the sampling conducted under Conditions 19.1.h(ii) and 19.1.h(iii), to compare the calculated HAP emissions using crude oil discharge analysis to those using the in-tank headspace analysis carried out concurrently.

(A) If the crude oil analysis methodology predicts higher emissions than the headspace sampling, the Permittee may sample crude oil once every 12 calendar months and calculate the HAP emissions according to Condition 19.1.g;

(B) If the crude oil analysis methodology predicts lower emissions than the headspace sampling, calculate HAP emissions by sampling at quarterly intervals and calculate according to Condition 19.1.g and multiply all results by the ratio between test results from the validation demonstration. When HAP emissions fall below 90%, the Permittee may reduce sampling frequency to once every 12 calendar months and calculate HAP emissions according to Condition 19.1.g. The Permittee shall continue to multiply the results by the ratio determined during the validation demonstration.

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

a. Report under Condition 78 of the operating report, the following information:

(i) the results of any crude oil and fuel gas sample analysis obtained under Condition 19.1.c during the reporting period; 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 Condition 19.1.g and 19.1.h.

b. Report in accordance with Condition 77, if:

(i) the 12-month rolling total individual HAP emissions from the flare exceeds the limit in Condition 19;

(ii) the 12-month rolling total aggregate HAP emissions from the flare exceeds the limit in Condition 19; or

(iii) the monitoring, recordkeeping, or reporting requirements are not in accordance with Condition 19.1.a through 19.1.h.

[Conditions 2 & 3, Construction Permit AQ0072CPT02, 10/28/05]
[18 AAC 50.040(j), 7/25/08; 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)]

Electrification and Automation (Strategic Reconfiguration)

20. Authorization. The Permittee shall configure EU ID 23 and 25a with Dry Low Emissions (DLE) Technology.[9]

[Condition 1, Minor Permit AQ0072MSS03, 3/7/2013]
[18 AAC 50.040(j), 7/25/08; 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)]

[9] The Permittee has completed all one-time requirements for EUs 23, 25a, and 26 from Condition 1 of Minor Permit AQ0072MSS03 and they were removed with the issuance of Operating Permit AQ0072TVP03 Rev. 2.

Ambient Air Quality Protection Requirements

21. Operational Limits (NOx, SO_2). The Permittee shall restrict 12 consecutive month total operating hours of EU ID 26 to less than 300 hours to protect ambient air quality.

21.1. Monitor and record hours that EU ID 26 operated for each month.

21.2. By the last day of each month, add the previous month's total to preceding 11 months to get the 12 consecutive months' total.

21.3. Report as excess emissions as described in Condition 77 if the 12-month total exceeds the limit in Condition 21.

21.4. Include copies of records required under Condition 21.1 and 21.2 with the operating report for that period as described in Condition 78.

[Condition 2, Minor Permit AQ0072MSS03, 3/7/2013]
[18 AAC 50.040(j), 7/25/08; 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)]

22. Fuel Sulfur (SO_2) Limits. The Permittee shall comply with SO_2 ambient air quality standards and increments as follows:

22.1. Limit the H_2S concentration of fuel gas to no greater than 150 ppmv. Monitor, record, and report as follows:

a. Obtain a quarterly statement from the fuel supplier of the fuel H_2S level in ppm or analyze a representative sample of the fuel quarterly to determine the sulfur content using either ASTM D4084, D5504, D4810, D4913, D6228 or GPA Standard 2377, or other listed method approved in 18 AAC 50.035(b)-(c) or 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).

b. Keep records of the quarterly statements from the fuel supplier or the H_2S content analysis required under 22.1.a.

c. Include copies of the records from Condition 22.1.b in the operating report required by Condition 78.

d. Report as described in Condition 77 any time the fuel gas H_2S concentration exceeds 150 ppmv.

22.2. Limit the diesel fuel sulfur content to no greater than 0.20 percent by weight. Monitor, record, and report as follows:

a. For each shipment of fuel, obtain receipts from the fuel supplier that specify the fuel grade and amount of fuel or test the fuel to determine the sulfur content using an appropriate method listed in 18 AAC 50.035(b)-(c).

b. Keep records of the receipts from the fuel supplier or the sulfur content analysis required under Condition 22.2.a.

c. Include copies of the records from Condition 22.2.b in the operating report required by Condition 78.

d. Report as described in Condition 77 any time the diesel fuel sulfur content exceeds 0.2 percent by weight.

[Condition 3, Minor Permit AQ0072MSS03, 03/07 2013]
[18 AAC 50.040(j); 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)]

Owner Requested Limits to Avoid Project Classification as a PSD Major Modification

23. Carbon Monoxide (CO) Limit. For EU IDs 23 and 25a, the Permittee shall:

23.1. Use the following limits that are based on vendor data, and as indicated in Condition 23.3[10],

a. for EU ID 23,

(i) limit operating hours in Tier 3 ($H_{Tier\ 3}$) to no more than 1,188 hours per 12 consecutive months; and

(ii) limit operating hours in Tier 2 ($H_{Tier\ 2}$) as defined in Equation 1

Equation 1 $$H_{Tier\,2} = 4{,}296 - 3.559(H_{Tier\,3})$$

Where: H_{Tier3} = number of hours in Tier 3 (maximum 1,188);
H_{Tier2} = number of hours in Tier 2; and

b. for EU ID 25a, limit operating hours in Tier 3 to no more than 264 hours per 12 consecutive months.

c. for EU ID 23, ensure the hourly average[11] minimum intake temperature is above -20°F by preheating intake air.

23.2. For EU IDs 23 and 25a separately, record the hourly average turbine intake temperature (T) in degrees Fahrenheit.

23.3. For EU IDs 23 and 25a separately, using an hour meter, monitor and record the hourly load, calculated as follows:

a. Measure and record the hourly average power output in kilowatts (kW).

b. For each hour, based on T recorded in Condition 23.2, calculate the maximum turbine load in kW for that hourly temperature as follows:

(i) For EU ID 23:

(A) If T is less than or equal to -20°F

$$L_{MAX} = 14{,}278;$$

[10] In this permit, *Tier 1 operating mode* means operation at greater than 60 percent load, *Tier 2* means operation at less than or equal to 60 percent load but greater than 50 percent load, and *Tier 3* means operation at less than or equal to 50 percent load, with loads calculated as indicated in Condition 23.3.b

[11] For this permit, hourly average shall be calculated using a minimum of one data point every 15 minutes, excluding periods of startup not to exceed 10 minutes.

(B) If T is between -20°F and 20°F:

$$L_{MAX} = 14{,}671 + 15.35T - 0.215T^2$$; and

(C) If T is above 20°F:

$$L_{MAX} = 16{,}039 - 60.43T$$

Where: L_{MAX} = Maximum turbine load in kW
T = Hourly temperature in degrees Fahrenheit

(ii) For EU ID 25a:

(A) If T is less than or equal -30°F;

$$L_{MAX} = 7100$$;

(B) If T is greater than -30°F;

$$L_{MAX} = 6{,}414.1 - 18.948T - 0.046T^2$$

c. Calculate the hourly percent load for each hour by dividing the actual power output in kW recorded in Condition 23.3.a by the maximum load calculated in Condition 23.3.b.

23.4. Sample fuel gas quarterly and calculate heat content (in MMBtu/lb[12]) in accordance with ASTM D3588 or 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).

23.5. No later than the last day of each month, calculate:

a. the total number of hours EU ID 23, operated in Tier 3 for the previous month, then add that total to the total for the preceding 11 months to get the 12-month total;

b. the total number of hours EU ID 23, operated in Tier 2 for the previous month, then add that total to the total for the preceding 11 months to get the 12-month total; and

c. the total number of hours EU ID 25a operated in Tier 3 for the previous month, then add that total to the total for the preceding 11 months to get the 12-month total.

23.6. Report as described in Condition 77 any time:

a. the cumulative 12-month total operating hours for EU IDs 23 and 25a exceed any limit in Condition 23.1.a or 23.1.b;

b. the hourly average turbine intake temperature for EU ID 23 is below the limit in Condition 23.1.c.

[12] Corrected the material mistake in Permit No. AQ0072CPT03 for the *pound* abbreviation, from *lbm* to *lb*.

23.7. Report as described in Condition 78:

a. the monthly and 12 consecutive month total operating hours in each tier for EU IDs 23 and 25a;

b. the quarterly fuel heat content (LHV); and

c. the minimum hourly average turbine intake temperature for EU ID 23.

[Condition 4, Minor Permit AQ0072MSS03, 3/7/2013]
[18 AAC 50.040(j); 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)]

Insignificant Emissions Units

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

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

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

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

[18 AAC 50.055(b)(1)]

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

[18 AAC 50.055(c)]

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

a. Submit the compliance certifications of Condition 79 based on reasonable inquiry;

b. Comply with the requirements of Condition 60;

c. Report in the operating report required by Condition 78 if an emissions unit has historically been classified as insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and current actual emissions have become greater than any of those thresholds; and

d. No other monitoring, recordkeeping or reporting is required for insignificant emissions units to demonstrate compliance with the emissions standards under Conditions 24.1, 24.2, and 24.3.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(b)(4)]

[40 C.F.R. 71.6(a)(1) & (3)]

Section 4. Federal Requirements

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

Subpart A – General Provisions

25. NSPS Subpart A Notification.[13] For any affected facility[14] or existing facility[15] regulated under NSPS requirements in 40 C.F.R. 60, and required by the applicable subpart, the Permittee shall furnish the Department and EPA written or electronic notification of:

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

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

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

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

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

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

a. information describing the precise nature of the change,

b. present and proposed emission control systems,

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

d. the expected completion date of the change.

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

25.4. any proposed replacement of components 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]

[13] All requirements are one-time only in nature and have already been satisfied (except as specified in Conditions 25.1 and 25.2) absent activities initiated during the permit term that constitute a modification or reconstruction of an existing facility or construction and initial startup of an affected facility. The requirements apply as indicated unless otherwise specified by an applicable subpart.

[14] *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.

[15] *Existing facility* means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in 40 C.F.R. Part 60, 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.

a. the name and address of owner or operator,

b. the location of the existing facility,

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

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

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

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

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

26. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements. The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU IDs 6 and 7 (when equipped with Solar Turbine Engine Serial Nos. 0756S21 and 0753S21) and EU IDs 23 and 25a, any malfunctions of associated air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for those units is inoperative.

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

27. NSPS Subpart A Performance (Source) Tests. The Permittee shall conduct source tests according to Section 6 and as indicated in this condition on any affected facility within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after initial startup, and at such other times as may be required by EPA, and shall provide the Department and EPA with a written report of the results of the source test. The Permittee shall:

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

27.1. 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]

27.2. Conduct source tests under conditions specified by EPA to be based on representative performance of EU IDs 6 and 7 (when equipped with Solar Turbine Engine Serial Nos. 0756S21 and 0753S21) and EU IDs 23 and 25a.

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

27.3. Provide the EPA and the Department at least 30 days in advance of the source test.

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

27.4. 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]

28. 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 6 and 7 (when equipped with Solar Turbine Engine Serial Nos. 0756S21 and 0753S21), and EU IDs 23 and 25a 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 those units.

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

29. 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 32.1.a, 32.1.b, 33.1, 33.2, 34, and 35, 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 6 and 7 (when equipped with Solar Turbine Engine Serial Nos. 0756S21 and 0753S21), EU IDs 23 and 25a 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]

30. NSPS Subpart A Concealment of Emissions. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Conditions 32.1.a, 32.1.b, 33.1, 33.2, 34, and 35. 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]

NSPS Subpart GG[16] – Stationary Gas Turbines

EU IDs 6 and 7 (when equipped with Solar Turbine Engine Serial Nos. 0756S21 or 0753S21) and EU ID 23.

[16] The provisions of NSPS Subpart GG listed in Conditions 31 through 33 are current as amended through December 4, 2020. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

31. Turbine Engine Replacement and Relocations. The Permittee may move turbine engines, from a pool of turbine engines, from location to location between TAPS pump stations to allow for maintenance of turbine engines. Solar Turbine Engine Serial Nos. 0756S21 and 0753S21 may be used to replace the existing turbine engines located in positions for EU IDs 6 and 7. Condition 31.2 through 31.5 apply only to Solar gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour.

31.1. The Permittee shall comply with the requirements of NSPS Subpart GG as set out in Conditions 32 through 33.3 when EU IDs 6 and 7 are equipped with Solar Turbine Engine Serial Nos. 0756S21 and 0753S21.

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

31.2. 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.

31.3. 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.

31.4. 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.

31.5. The Permittee shall submit a copy of the records required by Condition 31.3 with the operating report required by Condition 78 for all turbine engines switched during the reporting period.

[EPA Letter, 40 C.F.R. 60 Subpart GG Applicability Determination, 8/1/02]
[18 AAC 50.040(j) & 50.326(j)]

32. NSPS Subpart GG NO_X Standard.

32.1. The Permittee shall not allow the exhaust gas concentration of NO_X from

a. EU IDs 6 and 7 (when equipped with Solar Turbine Engine Serial Nos. 0756S21 and 0753S21) to exceed **150 ppmv** at 15 percent Oxygen (O_2) dry exhaust basis; and

b. EU ID 23 to exceed **212 ppmv** at 15 percent O_2 dry exhaust basis.

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

32.2. **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 32.1 that operates for 400 hours or more in any 12-month period during the life of this permit, the Permittee shall satisfy either Condition 32.2.a(i) or 32.2.a(ii).

(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 32.1, 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 in the noted timeframe:

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

(B) Within 1 year of the effective date of this permit if the last source test occurred greater than five years prior to the effective date of this permit and the 400-hour threshold was triggered within 6 months of the permit's effective date, or

(C) Within 1 year after exceeding 400 hours of operation in a 12-month period if the last 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 32.1, 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 in Condition 32.1.

b. **Substituting Test Data**. The Permittee may use a source test completed under Condition 32.2.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 emission limit of Condition 32.1, and are projected under Condition 32.2.c to be less than or equal to 90 percent of the limit at maximum load;

(ii) for any source test conducted after the effective date of this permit, the Permittee identifies in a source test plan under Condition 69

(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 emission limit of Condition 32.1.

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

(i) Conduct all tests under Condition 32.2 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 effective 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 32.2 to predict the highest load at which emissions will comply with the limit in Condition 32.1;

(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 limit of Condition 32.1;

(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 32.2.c(iii)(A); the new limit is subject to any new Department finding under Condition 32.2.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 32.2.c(iii).

(v) For the purposes of Conditions 32.2 through 32.4, 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.

32.3. **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 32.2.c(iii) does not show compliance with the limit of Condition 32.1 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 32.3.a shall be hourly or otherwise as approved by the Department.

(iii) Within one month after submitting a demonstration under Condition 32.2.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 32.2.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. For any turbine subject to Condition 32.1, that will operate less than 400 hours in any 12 consecutive months, the Permittee shall keep monthly records of the hours of operation.

32.4. **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 78 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 32.2.c(iii)

(i) the load limit;

(ii) the turbine identification; and

(iii) the highest load recorded under Condition 32.3.a during the period covered by the operating report.

b. In each operating report under Condition 78 for each turbine for which Condition 32.2 has not been satisfied because the turbine normally operates less than 400 hours in any 12 consecutive months, 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 77 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 32.2.a(i) or 32.2.a(ii) but not performed, or

(iii) the turbine was operated at a load exceeding that allowed by Conditions 32.2.c(iii)(B) and 32.2.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) - (c) & 50.040(a)(1)]
[40 C.F.R. 60.8(b), Subpart A]

33. NSPS Subpart GG SO_2 Standard. The Permittee shall comply with either the SO_2 standard in Condition 33.1, or the fuel sulfur content standard in Condition 33.2 below:

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

33.1. Do not allow the exhaust gas concentration of SO_2 from EU IDs 6 and 7 (when equipped with Solar Turbine Engine Serial Nos. 0756S21 and 0753S21) and EU ID 23 listed in Table A, to exceed 150 ppmvd corrected to 15 percent O_2, or

[40 C.F.R. 60.333(a), Subpart GG]

33.2. Do not allow the sulfur content for the fuel burned in EU IDs 6 and 7 (when equipped with Solar Turbine Engine Serial Nos. 0756S21 and 0753S21) and EU ID 23 to exceed 0.8 percent by weight.

[40 C.F.R. 60.333(b), Subpart GG]

33.3. **Monitoring.** The Permittee has elected not to monitor the total sulfur content of the gaseous fuel combusted in the turbine for the purposes of 40 C.F.R. 60, Subpart GG because the gaseous fuel has been demonstrated to meet the definition of natural gas in 40 C.F.R. 60.331(u), regardless of whether an existing custom schedule approved by the Administrator requires such monitoring.[17] The Permittee shall use one of the following sources of information to make the required demonstration:

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

b. Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20.0 grains/100 scf. At a minimum, the amount of fuel sampling data specified in Section 2.3.1.4 or 2.3.2.4 Appendix D to 40 C.F.R. Part 75 is required.

[18 AAC 50.040(a)(2)(V)]
[40 C.F.R. 60.334(h)(3)]

33.4. **Recordkeeping**. Keep records of the information required by Condition 33.3.a and 33.3.b in accordance with recordkeeping requirements in Condition 73.

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

[17] The Permittee submitted a demonstration to EPA, pursuant to 40 C.F.R. 60.334(h)(3), to show that the fuel gas combusted at Pump Stations 1-4 meets the definition of natural gas as defined by 40 C.F.R. 60.331(u). EPA confirmed by letter dated December 11, 2006 stating that the fuel gas demonstration adequately meets the definition criteria for natural gas, as defined in 40 C.F.R. 60.331(u).

33.5. **Reporting**. Include in each operating report required by Condition 78, the records required by Condition 33.4.

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

NSPS Subpart KKKK – Stationary Gas Turbines, EU ID 25a

34. NSPS Subpart KKKK NO_X Standard. For EU ID 25a listed in Table A, the Permittee shall meet the NO_X emission limits of 150 ppm at 15 percent O_2 or 1,100 ng/J of useful output (8.7 lb/MWh) for turbines located north of the Arctic Circle.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4320(a) & Table 1, Subpart KKKK]

34.1. **Monitoring**. The Permittee shall perform annual performance tests in accordance with Condition 34.4 to demonstrate continuous compliance, as follows:

a. If the NO_X emission result from the performance test is less than or equal to 75 percent of the NO_X emission limit in Condition 34, the Permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test).

[40 C.F.R. 60.4340(a), Subpart KKKK]

b. If the results of any subsequent performance test exceed 75 percent of the NO_X emission limit in Condition 34, the Permittee must resume annual performance tests. (no more than 14 calendar months following the previous performance test).

[40 C.F.R. 60.4340(a) & 60.4400(a), Subpart KKKK]

34.2. **Recordkeeping**. The Permittee shall keep records of all performance tests data in accordance with Condition 73.

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

34.3. **Reporting**. The Permittee shall submit a written report of the results of each performance test required under Condition 34.1 and 34.4 before the close of business on the 60th day following the completion of the performance test and in accordance with Condition 71.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)]
[40 C.F.R. 60.4375(b); Subpart KKKK]

34.4. **Performance Tests**. The Permittee shall conduct an initial performance test as required in Condition 27, and subsequent NO_X performance tests, as provided in Conditions 34.1.a and 34.1.b.

a. The Permittee may use either one of the two methodologies described below in Conditions 34.4.a(i) or 34.4.a(ii) to conduct performance test. For each test run:

(i) Measure the NO_X concentration (in ppm), using EPA Method 7E or EPA Method 20 in Appendix A of 40 C.F.R 60. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in Appendix A of 40 C.F.R 60, and measure and record the electrical and thermal output from the unit. Then, use the following equation to calculate the NO_X emission rate:

$$\mathbf{E=\frac{\left(1.194\times10^{-7}\right)\times(NO_x)_c\times(Q_{std})}{P}}$$

Where:

E	=	NO_X emission rate, in lb/MWh
1.194×10^{-7}	=	conversion constant, in lb/(dscf-ppm)
$(NO_X)_c$	=	average NO_X concentration for the run, in ppm
Q_{std}	=	stack gas volumetric flow rate, in dcf/hr
P	=	gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to 40 C.F.R. 60.4350(f)(2); or

(ii) Measure the NO_X and diluent gas concentrations, using either EPA Methods 7E and 3A, or EPA Method 20 in Appendix A of 40 C.F.R. 60. Concurrently measure the heat input to the unit, using a fuel flow meter(s), and measure the electrical and thermal output of the unit. Use EPA Method 19 in Appendix A of 40 C.F.R. 60 to calculate the NO_X emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in 40 C.F.R. 60.4350(f) to calculate the NO_X emission rate in lb/MWh.

b. Sampling traverse points for NO_X and (if applicable) diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

c. Notwithstanding Condition 34.4.b, test at fewer points than are specified in EPA Method 1 or EPA Method 20 in Appendix A 40 C.F.R. 60 if the following conditions are met:

(i) Perform a stratification test for NO_X and diluent pursuant to the procedures specified in Section 6.5.6.1(a) through (e) of Appendix A of 40 C.F.R. 75;

(ii) Once the stratification sampling is completed, use the following alternative sample point selection criteria for the performance test:

(A) If each of the individual traverse point NO_X concentrations is within ±10 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±5 ppm or ±0.5 percent CO_2(or O_2) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NO_X concentration during the stratification test; or

(B) Sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NO_X concentrations is within ±5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ±3 ppm or ±0.3 percent CO_2 (or O_2) from the mean for all traverse points;

d. The Permittee shall conduct performance test, as follows:

(i) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load.

(ii) The Permittee may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice; and

(iii) The Permittee must conduct three separate test runs for each performance test at a minimum time of 20 minutes per run.

e. Compliance with the applicable emission limit in Condition 34 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NO_X emission rate at each tested level meets the applicable emission limit in Condition 34.

f. The ambient temperature must be greater than 0 °F during the performance test.

[40 C.F.R. 60.4400, Subpart KKKK]

35. NSPS Subpart KKKK SO_2 Standard. The Permittee shall not burn in EU ID 25a any fuel which contains total potential sulfur emissions in excess of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input.

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

[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4330(a)(2), Subpart KKKK]

35.1. **Monitoring**. Monitor and record compliance with the standards listed in this condition as follows:

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i)]
[40 C.F.R. 60.4360, Subpart KKKK]

a. The Permittee has elected not to monitor the total sulfur content of the fuel combusted in the turbine as allowed under 40 C.F.R. 60.4365, because the gaseous fuel has been demonstrated not to exceed 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input. The Permittee must use one of the following sources of information to make the required demonstration:

(i) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less and has potential sulfur emissions of less than 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input; or

(ii) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input. At a minimum, the amount of fuel sampling data specified in Section 2.3.1.4 or 2.3.2.4 of Appendix D to 40 C.F.R. Part 75 is required.

[40 C.F.R. 60.4365, Subpart KKKK]

35.2. **Recordkeeping**. Keep records of the information required by Condition 35.1.a(i) and 35.1.a(ii) in accordance with recordkeeping requirements in Condition 73.

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

35.3. **Reporting**. Include in each operating report required by Condition 78, the records required by Condition 35.2.

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

36. NSPS Subpart KKKK General Compliance Monitoring. The Permittee shall operate and maintain EU ID 25a, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 60.4333(a), Subpart KKKK]

40 C.F.R. Part 63 National Emission Standards for Hazardous Air Pollutants (NESHAP)

Subpart A – General Provisions

37. NESHAP Subpart A Applicability. 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 40 C.F.R. 63, Subpart ZZZZ for EU IDs 20 and 26 listed in Table A.

[18 AAC50.040(c)(1), (23) & (39), 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (a)(3)]
[40 C.F.R. 63.1-63.15, Subpart A]
[40 C.F.R. 63.6665 & Table 8, Subpart ZZZZ]

NESHAP Subpart ZZZZ[18] – Stationary RICE, EU IDs 20 and 26

38. NESHAP Subpart ZZZZ Applicability. The Permittee shall comply with applicable requirements specified in Conditions 39 through 43 for existing[19] non-emergency stationary compression ignition reciprocating internal combustion engines (CI RICE) EU IDs 20 and 26 located at an area source of hazardous air pollutant (HAP) emissions.

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

39. NESHAPs Subpart ZZZZ Management Practices. The Permittee shall comply with the following management practices.

39.1. For non-emergency engines EU IDs 20[20] and 26, the Permittee shall:

a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first, except as allowed by Condition 41.2;

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

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

[40 C.F.R. 63.6603(a) & Table 2d, Item 1 & Footnote 1, Subpart ZZZZ]
[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

40. NESHAPs Subpart ZZZZ General Compliance Requirements. For EU IDs 20 and 26, the Permittee shall comply with the applicable requirements for RICE as follows:

[18] The provisions of NESHAP Subpart ZZZZ listed in Conditions 38 through 43 are current as of December 4, 2020. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

[19] In accordance with 40 C.F.R. 6590(a)(1)(iii), a stationary RICE located at an area source of HAP emissions is *existing* if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

[20] The Permittee chooses to classify EU 20 as a non-emergency engine, for purposes of 40 C.F.R. 63, Subpart ZZZZ purposes.

40.1. **Good Air Pollution Control Practices.** At all times, operate and maintain the emission units, including any associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but not limited to monitoring results, review of operation, maintenance procedures and records, and inspection of the source.

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

40.2. The Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to either

a. the manufacturer's emission related written operation and maintenance instructions; or

b. a maintenance plan developed by the Permittee which must provide, to the extent practicable, for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[40 C.F.R. 63.6625(e)(3) & (4), 63.6640(a) & Table 6, Item 9, Subpart ZZZZ]

41. NESHAPs Subpart ZZZZ Monitoring Requirements: The Permittee shall monitor the emission units as follows:

41.1. **Startup and Idle Time.** Minimize the engine's time spent at idle during startup and minimize the engine's start up time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emissions limitations apply.

[40 C.F.R. 63.6625(h) & Table 2d, Item 1, Subpart ZZZZ]

41.2. The Permittee has the option to utilize an oil analysis program to extend the specified oil change requirement in Condition 39.1.a as described below:

a. The oil analysis must be performed at the same frequency specified for changing the oil in Condition 39.1.a.

b. 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:

(i) total Base Number is less than 30 percent of the Total Base Number of the oil when new;

(ii) viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or

(iii) percent water content (by volume) is greater than 0.5.

a. If all of these condemning limits in Conditions 41.2.b(i) through 41.2.b(iii) are not exceeded, the engine owner or operator is not required to change the oil.

b. If any of the limits in Conditions 41.2.b(i) through 41.2.b(iii) are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis.

(i) If the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later.

a. The owner or operator 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.

b. The analysis program must be part of the maintenance plan for the engine as required in Condition 40.2.b.

[40 C.F.R. 63.6625(i), Subpart ZZZZ]

42. NESHAPs Subpart ZZZZ Recordkeeping Requirements: The Permittee shall keep records as follows:

42.1. Keep records required in Condition 39, as applicable, to show continuous compliance with the applicable management practices in Conditions 40 and 41.

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

42.2. Keep records of the maintenance conducted on the stationary RICE to demonstrate that the Permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to its own maintenance plan if electing to comply with Condition 40.2.b, including, but not limited to, the parameters analyzed, the results of the oil analysis, and the oil changes for the engine as part of the oil analysis program described in Condition 41.2.

[40 C.F.R. 63.6655(e)(3) & 63.6625(i), Subpart ZZZZ]

42.3. Keep records in a form suitable and readily available for expeditious inspection and review, readily accessible in hard copy or electronic form, and for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years may be maintained offsite.

[40 C.F.R. 63.6660, 63.6665, and Table 8, Subpart ZZZZ]
[40 C.F.R. 63.10(b)(1), Subpart A]

43. NESHAPs Subpart ZZZZ Reporting Requirements: The Permittee shall report as follows:

[18 AAC 50.040(c)(23) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(c)(3)(iii) & (c)(6)]

43.1. For EU IDs 20 and 26, include in the operating report required by Condition 78, a report of deviations as defined in 40 C.F.R. 63.6675 for each instance in which an applicable requirement in 40 C.F.R. 63, Subpart A as specified in Table 8 to Subpart ZZZZ was not met.

[40 C.F.R. 63.6640(b), 63.6650(f), Subpart ZZZZ]

40 C.F.R. Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAP)

Subpart A – General Provisions & Subpart M – Asbestos

44. The Permittee shall comply with the applicable 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]

40 C.F.R. Part 64 Compliance Assurance Monitoring (CAM) Requirements

45. CAM Requirements. The Permittee shall maintain and comply with the following CAM requirements for control of HAPs emissions from crude oil tank EU IDs 27 and 28 with the vapor flare control device EU ID 22.

[18 AAC 50.040(k) & 50.326(j)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[40 C.F.R. 64.2 – 64.5, CAM]

45.1. **Visible Emissions Indicator**. As part of tank farm monitoring a camera views the flare and flare flame continuously. As part of tank farm monitoring the control room operator or Operations Control Center (OCC) controller shall observe the flare camera monitor for abnormal visible emissions. An excursion for this indicator is when the control room operator or OCC controller views abnormal visible emissions from the flare camera monitor. Abnormal visible emissions shall be based upon the presence of consistent visible smoke. Corrective action is mandatory when abnormal visible emissions occur.

45.2. **Flare Tip Indicator.** As part of tank farm monitoring a camera views the flare and flare flame continuously. As part of tank farm monitoring the control room operator or OCC controller shall observe the flare camera monitor for the presence of a flare flame. A flare flame present indicates normal operating conditions. An excursion occurs if no flare flame is observable while vapors are routed to flare (while flare unit is in operation).

45.3. **Flare Air Blower Indicator**. Continuously monitor the flare air assist blower using visual and audible alarms that sound in the control room or the OCC if the blower flow drops below normal operating conditions. Blower flow of 8,000 scfm or greater indicates normal operating conditions. Blower flow less than 8,000 scfm indicates an excursion from normal operating conditions, except if the blower flow is reduced for maintenance and the flare is not exhibiting abnormal visible emissions under Condition 45.1 during maintenance reduced flow.

45.4. **Breakout Tank Pressure Indicator**. Continuously monitor the tank gaseous pressure for each tank, EU IDs 27 and 28, using visual and audible alarms that sound in the control room or the OCC if the tank pressure is above or below normal operating conditions. Tank pressures equal to or less than 2 inches of water column indicates normal operating conditions. Breakout tank pressure of above 2 inches of water indicates an excursion from normal operating conditions.

45.5. **CAM Plan Excursion and Corrective Action Recordkeeping**. For EU IDs 22, 27, and 28, excursions from the normal operating conditions of the indicators in Condition 45.1 through 45.4 shall trigger an investigation. Investigate as indicated below.

a. Record a description of the actions taken to reduce visible emissions for each excursion of the visible emissions indicator in Condition 45.1.

b. Record the following information for each excursion of the indicators described in Condition 45.1 through 45.4:

(i) The indicator for which the excursion occurred;

(ii) The date, time and duration of the excursion

(iii) The probable cause of the excursion; and

(iv) Corrective action taken or planned, including an estimated time of completion for planned corrective action.

45.6. **CAM Plan Excursion Reporting**. For EU IDs 22, 27 and 28 include in the operating report for the period covered by the report:

a. A summary of the time period of any excursion from the normal operating conditions described in Condition 45.1 through 45.4;

b. The observed value of any excursion;

c. A summary of the investigation results from any excursions, including any corrective actions taken; and

d. Speciated and total HAP emission calculations for direct venting excursions, (flare bypass or vent without flame incidents) for the duration of each excursion event.

45.7. **Emission Limit Compliance and Exceedance Reporting**. Observed normal operating conditions, as referenced in Condition 45.1 through 45.6, shall not excuse the Permittee from complying with emission limits stated elsewhere in this permit. For EU IDs 22, 27 and 28, an exceedance of any emissions limit (such as the HAP ORL or opacity standard) shall be reported as excess emissions as required under Condition 77, whether or not values outside of CAM plan normal operating conditions are observed.

40 C.F.R. Part 82 Protection of Stratospheric Ozone

46. Subpart F – Recycling and Emissions Reduction. The Permittee shall comply with the applicable 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]

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

[18 AAC 50.040(d) & 50.326(j)]
[40 C.F.R. 82.174(b) through (d), Subpart G]

48. Subpart H – Halons Emissions Reduction. The Permittee shall comply with the applicable prohibitions set out in 40 C.F.R. 82.270 (Protection of Stratospheric Ozone Subpart H – Halon Emission Reduction).

[18 AAC 50.040(d) & 50.326(j)]
[40 C.F.R. 82.270(b) through (f), Subpart H]

40 C.F.R. 63 NESHAP Applicability Determinations

49. 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).

49.1. If an owner or operator of a stationary source who is in the relevant source category determines that the source is not subject to a relevant standard or other requirement established under 40 C.F.R. 63, the owner or operator must keep a record as specified in 40 C.F.R. 63.10(b)(3).

49.2. If a source becomes affected by an applicable subpart of 40 C.F.R. 63, the owner or operator shall comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 C.F.R. 63.6(c).

49.3. After the effective date of any relevant standard promulgated by the Administrator under this part, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator and the Department of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in 40 C.F.R. 63.9(b).

[18 AAC 50.040(c)(1), 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii)]
[40 C.F.R. 63.1(b), 63.5(b)(4), 63.6(c)(1), 63.9(b), & 63.10(b)(3), Subpart A]

Section 5. General Conditions

Standard Terms and Conditions

50. 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)]

51. 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)]

52. 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)]

53. Administration Fees. The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-403.

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

54. Assessable Emissions. For each period from July 1 through the following June 30, the Permittee shall pay to the Department an annual emission fee based on the stationary source's assessable emissions, as determined by the Department under 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities 10 tons per year or greater. The quantity for which fees will be assessed is the lesser of the stationary source's:

54.1. potential to emit of 1,614 TPY; or

54.2. projected annual rate of emissions, in TPY, based upon actual annual emissions for the most recent calendar year, or another 12-month period approved in writing by the Department, when demonstrated by credible evidence of actual emissions, based upon the most representative information available from one or more of the following methods:

a. an enforceable test method described in 18 AAC 50.220;

b. material balance calculations;

c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or

d. other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided.

[18 AAC 50.040(j)(4), 50.035, 50.326(j)(1) & (3), 50.346(b)(1), 50.410, & 50.420]

55. Assessable Emission Estimates. The Permittee shall comply as follows:

55.1. no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions as determined in Condition 54.2. Submit actual emissions estimates in accordance with the submission instructions on the Department's Standard Permit Conditions web page at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-condition-i-submission-instructions/.

55.2. The Permittee shall include with the assessable emissions report all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates.

55.3. 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 in Condition 54.1.

[18 AAC 50.040(j)(4), 50.326(j)(1) & (3), 50.346(b)(1), 50.410, & 50.420]

56. Good Air Pollution Control Practice (GAPCP). The Permittee shall do the following for EU IDs 4, 6 and 7 (when not equipped with Solar Turbine Serial Nos. 0756S21 and 0753S21), 16 – 19, and 22:

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

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

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

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

57. 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)]

58. 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.

58.1. 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 58.1.a or to address the results of Department inspections that found potential problems; and

(ii) to prevent future dust problems.

58.2. The Permittee shall report according to Condition 60.3.

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

59. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a stationary source constructed or modified after November 1, 1982, except as authorized by a construction permit, Title V permit, or air quality control permit issued before October 1, 2004.

[18 AAC 50.055(g)]

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

[18 AAC 50.040(j)(4), 50.110, 50.326(j)(3) & 50.346(a)]
[40 C.F.R. 71.6(a)(3)]

60.1. **Monitoring.** The Permittee shall monitor as follows:

a. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 60.

b. The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

(i) after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 60; or

(ii) the Department notifies the Permittee that it has found a violation of Condition 60.

60.2. **Recordkeeping.** The Permittee shall keep records of

a. the date, time, and nature of all emissions complaints received;

b. the name of the person or persons that complained, if known;

c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 60; and

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

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

a. With each stationary source operating report under Condition 78, the Permittee shall include a brief summary report which must include the following for the period covered by the report:

(i) the number of complaints received;

(ii) the number of times the Permittee or the Department found corrective action necessary;

(iii) the number of times action was taken on a complaint within 24 hours; and

(iv) the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.

b. The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

c. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 77.

61. Technology-Based Emission Standard. If an unavoidable emergency, malfunction (as defined in 18 AAC 50.235(d)), or non-routine repair (as defined in 18 AAC 50.990(64), causes emissions in excess of a technology-based emission standard[21] listed in Conditions 32.1, 33.1, 33.2, 34, 35, 46 (refrigerants), the Permittee shall

61.1. take all reasonable steps to minimize levels of emissions that exceed the standard; and

61.2. report in accordance with Condition 77.1.b; the report must include information on the steps taken to mitigate emissions and corrective measures taken or to be taken.

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

Open Burning Requirements

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

62.1. The Permittee shall keep written records to demonstrate that the Permittee complies with the requirements of 18 AAC 50.065. Upon request by the Department, submit copies of the records.

62.2. Compliance with this condition shall be an annual certification conducted under Condition 79.

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

[21] As defined in 18 AAC 50.990(106), the term "*technology-based emission standard*" means a best available control technology (BACT) standard; a lowest achievable emission rate (LAER) standard; a maximum achievable control technology (MACT) standard established under 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

Section 6. General Source Testing and Monitoring Requirements

63. 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)]

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

[18 AAC 50.220(b)]

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

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

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

65.1. 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]

65.2. 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]

65.3. 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]

65.4. Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9. The Permittee may use the form in Section 12 to record data.

[18 AAC 50.030 & 50.220(c)(1)(D)]

65.5. 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]

65.6. Source testing for emissions of PM_{10} and $PM_{2.5}$ 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]

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

[18 AAC 50.040(c)(32) & 50.220(c)(2)]
[40 C.F.R. 63, Appendix A, Method 301]

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

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

67. Test Exemption. The Permittee is not required to comply with Conditions 69, 70 and 71 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.1).

[18 AAC 50.345(a)]

68. 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)]

69. Test Plans. Except as provided in Condition 67, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the emissions unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 63 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

[18 AAC 50.345(a) & (m)]

70. Test Notification. Except as provided in Condition 67, 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)]

71. Test Reports. Except as provided in Condition 67, within 60 days after completing a source test, the Permittee shall submit one certified copy of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in Condition 74. 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)]

72. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in Conditions 6 and 24.2, the three-hour average is determined using the average of three one-hour test runs.

[18 AAC 50.220(f)]

Section 7. General Recordkeeping and Reporting Requirements

Recordkeeping Requirements

73. The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

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

73.2. 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.

[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)]

Reporting Requirements

74. 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.

74.1. The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if the person providing the electronic signature

a. uses a security procedure, as defined in AS 09.80.190, that the Department has approved; and

b. accepts or agrees to be bound by an electronic record executed or adopted with that signature.

[18 AAC 50.205, 50.326(j)(3), 50.345(a) & (j), & 50.346(b)(10)]

75. Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall submit to the Department one certified copy of reports, compliance certifications, and/or other submittals required by this permit. The Permittee may submit the documents electronically or by hard copy.

75.1. Submit the certified copy of reports, compliance certifications, and/or other submittals in accordance with the submission instructions on the Department's Standard Permit Conditions web page at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-condition-xvii-submission-instructions/.

[18 AAC 50.326(j)(3) & 50.346(b)(10)]

76. 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)]

77. Excess Emissions and Permit Deviation Reports. The Permittee shall report excess emissions and permit deviations as follows:

77.1. **Excess Emissions Reporting.** Except as provided in Condition 60, the Permittee shall report all emissions or operations that exceed emissions standards or limits of this permit as follows:

a. In accordance with 18 AAC 50.240(c), as soon as possible, report

(i) excess emissions that present a potential threat to human health or safety; and

(ii) excess emissions that the Permittee believes to be unavoidable.

b. In accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology-based emission standard.

c. If a continuous or recurring excess emissions is not corrected within 48 hours of discovery, report within 72 hours of discovery unless the Department provides written permission to report under Condition 77.1.d.

d. Report all other excess emissions not described in Conditions 77.1.a, 77.1.b, and 77.1.c within 30 days after the end of the month during which the excess emissions occurred or as part of the next routine operating report in Condition 78 for excess emissions that occurred during the period covered by the report, whichever is sooner.

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

77.2. **Permit Deviations Reporting.** For permit deviations that are not "excess emissions," as defined under 18 AAC 50.990:

a. Report according to the required deadline for failure to monitor, as specified in other applicable conditions of this permit (Conditions 4.2.b and 9.3.b).

b. Report all other permit deviations within 30 days after the end of the month during which the deviation occurred or as part of the next routine operating report in Condition 78 for permit deviations that occurred during the period covered by the report, whichever is sooner.

77.3. **Notification Form.** When reporting either excess emissions or permit deviations, the Permittee shall report using either the Department's online form, which can be found at the Division of Air Quality's Air Online Services (AOS) system webpage http://dec.alaska.gov/applications/air/airtoolsweb using the Permittee Portal option, or, if the Permittee prefers, the form contained in Section 13 of this permit. The Permittee must provide all information called for by the form that is used. Submit the report in accordance with the submission instructions on the Department's Standard Permit Conditions webpage found at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-iii-and-iv-submission-instructions/.

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

78. Operating Reports. During the life of this permit[22], the Permittee shall submit to the Department an operating report in accordance with Conditions 74 and 75 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.

78.1. The operating report must include all information required to be in operating reports by other conditions of this permit, for the period covered by the report.

78.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 78.1, the Permittee shall identify

a. the date of the excess emissions or deviation;

b. the equipment involved;

c. the permit condition affected;

d. a description of the excess emissions or permit deviation; and

e. any corrective action or preventive measures taken and the date(s) of such actions; or

[22] *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.

78.3. when excess emissions or permit deviation reports have already been reported under Condition 77 during the period covered by the operating report, the Permittee shall either

a. include a copy of those excess emissions or permit deviation reports with the operating report; or

b. cite the date(s) of those reports.

78.4. The operating report must include, for the period covered by the report, a listing of emissions monitored under Conditions 2.2.e, 7.2, 10.1, and 32.2.a which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report

a. the date of the emissions;

b. the equipment involved;

c. the permit condition affected; and

d. the monitoring result which triggered the additional monitoring.

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

[18 AAC 50.346(b)(6) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)(A)]

79. Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report according to Condition 75.

79.1. 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.

79.2. **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.

79.3. In addition, submit a copy of the report directly to the Clean Air Act Compliance Manager, US EPA Region 10, ATTN: Air Toxics and Enforcement Section, Mail Stop: 20-C04, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101-3188.

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

80. Emission Inventory Reporting. The Permittee shall submit to the Department reports of actual emissions for the previous calendar year, by emissions unit, of CO, NH_3, NO_x, PM_{10}, $PM_{2.5}$, SO_2, VOC and lead (Pb) and lead compounds, as follows:

80.1. **Every-year inventory.** Each year by April 30, if the stationary source's potential to emit for the previous calendar year equals or exceeds:

a. 250 TPY of NH_3, PM_{10}, $PM_{2.5}$ or VOCs; or

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

80.2. **Triennial inventory.** Every third year by April 30, if the stationary source's potential to emit (except actual emissions for Pb) for the previous calendar year equals or exceeds:

a. For stationary sources located in Attainment and Unclassifiable Areas:

(i) 0.5 TPY of actual Pb, or

(ii) 1,000 TPY of CO; or

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

b. For stationary sources located in Nonattainment Areas:

(i) 0.5 TPY of actual Pb; or

(ii) 1,000 TPY of CO or, when located in a CO nonattainment area, 100 TPY of CO; or

(iii) 100 TPY of SO_2, NH_3, PM_{10}, $PM_{2.5}$, NO_x, or VOC; or as specified in Conditions 80.2.b(iv) through 80.2.b(viii);

(iv) 70 TPY of SO_2, NH_3, $PM_{2.5}$, NO_x, or VOC in $PM_{2.5}$ serious nonattainment areas; or

(v) 70 TPY of PM_{10} in PM_{10} serious nonattainment areas; or

(vi) 50 TPY of NO_x or VOC in O_3 serious nonattainment areas; or

(vii) 25 TPY of NO_x or VOC in O_3 severe nonattainment areas; or

(viii) 10 TPY of NO_x or VOC in O_3 extreme nonattainment areas.

80.3. For reporting under Condition 80.2, the Permittee shall report the annual emissions and the required data elements under Condition 80.4 every third year for the previous calendar year as scheduled by the EPA.[23].

80.4. For each emissions unit and the stationary source, include in the report the required data elements[24] contained within the form included in the Emission Inventory Instructions available at the Department's AOS system on the Point Source Emission Inventory webpage at http://dec.alaska.gov/Applications/Air/airtoolsweb/PointSourceEmissionInventory.

80.5. Submit the report in accordance with the submission instructions on the Department's Standard Permit Conditions webpage at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-xv-and-xvi-submission-instructions/.

[18 AAC 50.040(j)(4), 50.200, 50.326(j)(3), & 50.346(b)(8)]
[40 C.F.R. 51.15, 51.30(a)(1) & (b)(1), and Appendix A to 40 C.F.R. 51 Subpart A]

81. NSPS and NESHAP Reports. The Permittee shall comply with the following:

81.1. **Reports:** Except for previously submitted reports and federal reports and notices submitted through EPA's Central Data Exchange (CDX) and Compliance and Emissions Data Reporting Interface (CEDRI) online reporting system, attach to the operating report required by Condition 78 for the period covered by the report, a copy of any NSPS and NESHAP reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10. For reports previously submitted to ADEC or submitted through CDX/CEDRI, state in the operating report the date and a brief description of each of the online reports submitted during the reporting period.

81.2. **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 50.040(j)(4) and 50.326(j)(4)]
[40 C.F.R. 60.13, 63.10(d) & (f) and 40 C.F.R. 71.6(c)(6)]

[23] The calendar years for which reports are required are based on the triennial reporting schedule in 40 C.F.R. 51.30(b)(1), which requires states to report emissions data to the EPA for inventory years 2011, 2014, 2017, 2020, and every 3rd year thereafter. Therefore, the Department requires Permittees to report emissions data for the same inventory years by April 30 of the following year (e.g., triennial emission inventory report for 2020 is due April 30, 2021, triennial emission inventory report for 2023 is due April 30, 2024, etc.).

[24] The required data elements to be reported to the EPA are outlined in 40 C.F.R. 51.15 and Tables 2a and 2b to Appendix A of 40 C.F.R. 51 Subpart A.

Section 8. Permit Changes and Renewal

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

82.1. 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;

82.2. The information shall be submitted to the Part 70 Operating Permit Program, US EPA Region 10, Air Permits and Toxics Branch, Mail Stop: 15-H13, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101-3188;

82.3. 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

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

[18 AAC 50.040(j)(7), 50.326(a) & (j)(3), and 50.346(b)(7)]
[40 C.F.R. 71.10(d)(1)]

83. 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)]

84. 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. Parts 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:

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

84.2. 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;

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

84.4. 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)(4)]
[40 C.F.R. 71.6(a)(12)]

85. Operational Flexibility. The Permittee may make CAA Section 502(b)(10)[25] 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):

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

85.2. For each such change, the notification required by Condition 85.1 shall include a brief description of the change within the permitted stationary source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

85.3. The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 85.

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

86. Permit Renewal. To renew this permit, the Permittee shall submit to the Department[26] an application under 18 AAC 50.326 no sooner than [18 months before the expiration date of this permit] 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) & (j)(2)]
[40 C.F.R. 71.5(a)(1)(iii) & 71.7(b) & (c)(1)(ii)]

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

[26] Submit permit applications to the Department's Anchorage office. The current address is: Air Permit Intake Clerk, ADEC, 555 Cordova Street, Anchorage, AK 99501.

Section 9. Compliance Requirements

General Compliance Requirements

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

87.1. included and specifically identified in the permit; or

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

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

88. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

88.1. an enforcement action;

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

88.3. denial of an operating permit renewal application.

[18 AAC 50.040(j), 50.326(j) & 50.345(a) & (c)]

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

[18 AAC 50.040(j)(3) & (4) and 50.326(j)]
[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(A)]

90. 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)]

91. 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

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

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

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

91.4. 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)]

92. 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.

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

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

93.2. 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 50.040(j)(4) and 50.326(j)]
[40 C.F.R. 71.6(f)(3)(i) & (ii)]

94. Table B identifies the emissions units that are not subject to the specified requirements at the time of permit issuance. If any of the requirements listed in Table 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 50.040(j)(4) and 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
Stationary-Source Wide	40 C.F.R. 51 Appendix Y – Guidelines for BART Determinations Under the Regional Haze Rule	PS-1 has been determined not to be a BART eligible source by the Department due to its distance from the nearest Class I area (Denali Park).
Flare, EU ID 22	40 C.F.R. 60 Subpart A; 40 C.F.R. 60.18 – General Control Device Requirements	Per 40 C.F.R. 60.18(a), these requirements apply only to facilities covered by subparts referring to this section. NSPS Subpart K does not specifically reference the general control device requirements of 40 C.F.R. 60.18.
Tanks 110 & 111	40 C.F.R. 60 Subpart Ka – Standards of Performance for Storage Vessels for Petroleum Liquids	Commenced construction prior to effective date of subpart (5/18/78). The tanks have not been modified or reconstructed since the effective date of the standard.
	40 C.F.R. 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)	Commenced construction prior to effective date of subpart (7/23/84). The tanks have not been modified or reconstructed since the effective date of the standard.
Tank 117	40 C.F.R. 60 Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids	The tank stores diesel fuel and diesel fuel oils are excluded from the definition of a petroleum liquid [40 C.F.R. 60.111(b)].
	40 C.F.R. 60 Subpart Ka – Standards of Performance for Storage Vessels for Petroleum	Commenced construction prior to effective date of subpart (5/18/78). The tank has not been modified or reconstructed since the

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	Liquids	effective date of the standard. In addition, diesel fuel oils are excluded from the definition of a petroleum liquid [40 C.F.R. 60.111a(b)].
	40 C.F.R. 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)	Commenced construction prior to effective date of subpart (7/23/84). The tanks have not been modified or reconstructed since the effective date of the standard.
Turbines, EU IDs 6 and 7 when equipped with Solar Turbine Engines Serial Nos. 0756S21 and 0753S21	40 C.F.R. 60 Subpart GG – Standards of Performance for Stationary Gas Turbines: 40 C.F.R. 60.332(a)(1) – Standards for NO_X	Standard applies to Electric Utility Stationary Gas Turbines, as defined in 40 C.F.R. 60.331(q). These units do not provide any electric power to utility power distribution systems [40 C.F.R. 60.332(b)].
	40 C.F.R. 60.334(a)-(g), (h)(2) – Monitoring of Operations	40 C.F.R. 60.334(a) and (b) apply only to turbines using water injection for NOx control. 60.334(c)-(g) are optional monitoring methods that APSC chooses not to conduct. Nitrogen monitoring under 60.334(h)(2) is not required because APSC has chosen not to claim an allowance for fuel bound nitrogen.
Turbines, EU IDs 4, 6, and 7 (when EU IDs 6 and 7 are not equipped with Solar Turbine Engines Serial Nos. 0756S21 and 0753S21)	40 C.F.R. 60 Subpart GG – Standards of Performance for Stationary Gas Turbines	Commenced construction prior to effective date of subpart (10/3/77). At the time of this application, turbines have not been modified or reconstructed, as defined in 40 C.F.R. 60.14 or 60.15, respectively.
Turbines , EU IDs 4, 6, 7, and 23	40 C.F.R. 60 Subpart KKKK – Standards of Performance for Stationary Combustion Turbines	Turbines with a heat input at peak load equal to or greater than 10 MMBtu/hr have commenced construction before 2/18/05, and have not been modified or reconstructed after this date.
Heaters, EU IDs 16 - 19	40 C.F.R. 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Commenced construction prior to effective date of subpart (6/9/89). At the time of this application, boilers have not been modified or reconstructed, as defined by 40 C.F.R. 60.14 or 60.15, respectively.
	40 C.F.R. 63, Subpart JJJJJJ	40 C.F.R. 63.11195(e) exempts gas-fired boilers / heaters, The boilers and heaters burn diesel only as a backup.
Sewage Stack Injection System(s)	40 C.F.R. 60 Subpart O – Standards of Performance for Sewage Treatment Plants	The injected sewage is not sewage sludge because the settleable solids are removed from the sewage prior to injection [40 C.F.R. 60.150].
Engine, EU IDs 20 and 26	40 C.F.R. 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Construction, modification, or reconstruction of the IC engine commenced prior to the applicability date of April 1, 2006 (see 40 C.F.R. 60.4200(a)(2(i)), and has not been modified or reconstructed after July 11, 2005 (see 40 C.F.R. 60.4200(a)(3)).
Stationary Source-Wide	40 C.F.R. 60 Subpart LLL – Standards of Performance for	Stationary source does not process natural gas [40 C.F.R. 60.640] and commenced

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	Onshore Natural Gas Processing Plants	construction prior to effective date of subpart (1/20/84). Stationary source has not been modified or reconstructed since the effective date of the standard.
Stationary Source-Wide	40 C.F.R. 61 Subpart A – General Provisions	Other that the asbestos renovation and demolition requirements of Subpart M, this subpart does not apply to this stationary source because it only applies where there are other subparts applicable to the stationary source.
	40 C.F.R. 61 Subpart J – National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene	No process components in benzene service, as defined by subpart (10 percent benzene by weight) [40 C.F.R. 61.110 and 61.111].
	40 C.F.R. 61 Subpart V – National Emission Standard for Equipment Leaks (Fugitive Emission Sources)	No process components in volatile hazardous air pollutant (VHAP) service, as defined by subpart (≥10 percent VHAP by weight) [40 C.F.R. 61.241 and 61.245]. This subpart only applies where identified by another applicable Part 61 subpart [40 C.F.R. 61.240].
	40 C.F.R. 61 Subpart Y – National Emission Standard for Benzene Emissions from Benzene Storage Vessels	The stationary source does not have storage tanks that store benzene as defined by the standards in 40 C.F.R. 61.270(a).
Stationary Source-Wide	40 C.F.R. 61 Subpart BB – National Emission Standard for Benzene Emissions from Benzene Transfer Operations	Crude oil and petroleum distillates are exempt from this subpart [40 C.F.R. 61.300]. Other than crude oil and other petroleum distillates there are no other benzene containing substances where loading occurs at this stationary source.
	40 C.F.R. 61 Subpart FF – National Emission Standard for Benzene Waste Operations	This subpart only applies to chemical manufacturing plants, coke byproduct recovery plants and petroleum refineries [40 C.F.R. 61.340]. This stationary source does not include any of those activities.
Stationary Source-Wide	40 C.F.R. 61 Subpart M – National Emission Standard for Asbestos 40 C.F.R. 61.142 - Standard for Asbestos Mills	Stationary source is not an Asbestos Mill.
	40 C.F.R. 61.144 – Standard for Manufacturing	Stationary source does not engage in any manufacturing operations using commercial asbestos.
	40 C.F.R. 61.146 – Standard for Spraying	Stationary source does not spray apply asbestos containing materials.
	40 C.F.R. 61.147 – Standard for Fabricating	Stationary source does not engage in any fabricating operations using commercial asbestos.
	40 C.F.R. 61.149 – Standard for Waste Disposal for Asbestos Mills	Applies only to those facilities subject to 40 C.F.R. 61.142 (Asbestos Mills).
	40 C.F.R. 61.151 – Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing	Applies only to those facilities subject to 40 C.F.R. 61.142, 61.144, or 61.147 (Asbestos Mills, manufacturing or fabricating).

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	and Fabricating Operations	
	40 C.F.R. 61.153 – Standard for Reporting	No reporting requirements apply for sources subject to 40 C.F.R. 61.145 (demolition and renovation) [40 C.F.R. 61.153(a)].
	40 C.F.R. 61.154 – Standard for Active Waste Disposal Sites	Stationary source not an active waste disposal site and does not receive asbestos containing waste material.
	40 C.F.R. 61.155 – Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations	Stationary source does not process regulated asbestos containing material (RACM).
Storage Tanks	40 C.F.R. 63 Subpart OO – National Emission Standards for Tanks - Level 1	Provisions only apply to tanks subject to a subpart of 40 C.F.R. 60, 61, or 63 that specifically reference 40 C.F.R. 63 Subpart OO. The stationary source does not include any tanks subject to subparts of Part 60, 61, or 63 that cross reference 40 C.F.R. 63 Subpart OO.
Portable Storage Containers	40 C.F.R. 63 Subpart PP – National Emission Standards for Containers	Provisions only apply to portable containers, as defined in 40 C.F.R. 63.921, subject to a subpart of 40 C.F.R. 60, 61, or 63 that specifically references 40 C.F.R. 63 Subpart PP. The stationary source does not include any containers subject to subparts of Part 60, 61, or 63 that cross reference 40 C.F.R. 63 Subpart PP.
Drain Systems	40 C.F.R. 63 Subpart RR – National Emission Standards for Individual Drain Systems	Provisions only apply to drain systems affected by 40 C.F.R. 60, 61, or 63 that specifically reference 40 C.F.R. 63 Subpart RR. The stationary source does not include any drain systems subject to subparts of Part 60, 61, or 63 [40 C.F.R. 63.960] that cross reference 40 C.F.R. 63 Subpart RR.
Oil-Water Separators	40 C.F.R. 63 Subpart VV – National Emission Standards for Oil-Water Separators and Organic-Water Separators	EPA stated that these provisions were placed within this standard only for convenience and only where a stationary source is subject to another Part 60, 61, or 63 subpart that references Subpart VV [40 C.F.R. 63.1040]. This stationary source is not subject to any subpart in Part 60, 61, or 63 that references Subpart VV.
Stationary Source-Wide	40 C.F.R. 63 Subpart HHHHHH – NESHAP for Paint Stripping and Miscellaneous Surface Coating Operations	MeCl is not used for paint stripping. Painting activities occurring at the stationary source meet the definition of facility maintenance as defined by 40 C.F.R. 63.11180, and thus, are categorically exempt from 63.11170(a)(2) & (3). This shield is not valid if APSC operations change in regards to using MeCl.
Stationary Source-Wide	40 C.F.R. 63 Subpart T – National Emission Standards for Halogenated Solvent Cleaning	Stationary source does not operate halogenated solvent cleaning machines.
	40 C.F.R. 63 Subpart YYYY – NESHAP for Stationary	PS-1 is not a major source of HAPs as defined under any subpart of 40 C.F.R. 63

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	Combustion Turbines	
	40 C.F.R. 63 Subpart CCCCCC NESHAP Source Category for Gasoline Dispensing Facilities (GDF)	Stationary source does not meet the definition of a Gasoline Dispensing Facility under 40 C.F.R. 63.11132 because gasoline is not dispensed in "motor vehicles" as defined by CAA Section 216.
	40 C.F.R. 63 Subpart DDDDD – NESHAP for Industrial/Commercial/Institutional Boilers and Process Heaters	PS-1 is not a major source of HAPs as defined under any subpart of 40 C.F.R. 63.
Stationary Source-Wide	40 C.F.R. 68 – Accidental Release: Risk Management Plan (RMP)	Part 68 only includes those facilities defined as "stationary sources" at 40 C.F.R. 68.3. "Stationary source" expressly excluded 49 C.F.R. Part 195 facilities. PS-1 is a 49 C.F.R. Part 195 stationary source.
Stationary Source-Wide	40 C.F.R. 82.1 Subpart A – Production and Consumption Controls	Stationary source does not produce, transform, destroy, import or export Class 1 or Group I or II substances or products.
	40 C.F.R. 82.30 Subpart B – Servicing of Motor Vehicle Air Conditioners	Stationary source does not service motor vehicle air conditioners.
	40 C.F.R. 82.60 Subpart C – Ban on Nonessential Products Containing Class I Substances and Ban on Nonessential Products Containing or Manufactured with Class II Substances	Stationary source does not manufacture or distribute Class I and II products or substances.
	40 C.F.R. 82.80 Subpart D – Federal Procurement	Subpart applies only to Federal Departments, agencies, and instrumentalities.
	40 C.F.R. 82.100 Subpart E – The Labeling of Products Using Ozone-Depleting Substances	Stationary source does not manufacture or distribute Class I and II products or substances.
	40 C.F.R. 82.158 Subpart F – Recycling and Emissions Reduction	Stationary source does not manufacture or import recovery and recycling equipment.
	40 C.F.R. 82.160 – Recycling and Emissions Reduction	Stationary source does not contract equipment testing organizations to certify recovery and recycling equipment.
	40 C.F.R. 82.164 – Recycling and Emissions Reduction	Stationary source does not sell reclaimed refrigerant.
Stationary Source-Wide	18 AAC 50.055(a)(2) - (a)(9)	Stationary source does not operate sources specific to the listed standards.
	18 AAC 50.055(b)(2) - (b)(6)	Stationary source does not operate sources specific to the listed standards.
Stationary Source-Wide	18 AAC 50.055(d) - (f)	Stationary source does not operate sources specific to the listed standards.
	18 AAC 50.075	The stationary source does not contain a wood fired heating device.

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

Section 11. HAP Content of Crude Oil Storage Tank Vapors and Fuel Gas

Procedure for HAP Content of Crude Oil Storage Tank Vapors

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), $\mathbf{Z_{Li}}$	Component Molecular Weight, $\mathbf{M_i}$	Total Moles of Crude (sum Z_{Li}/M_i x 1000), $\mathbf{x_T}$	Component Mole Fraction in Crude ($Z_{Li}/M_i/x_T$), $\mathbf{x_i}$	Crude Molecular Weight (sum M_i*x_i), $\mathbf{M_T}$
Methane		16			
Ethane		30			
Propane		44			
Isobutane		58			
N-Butane		58			
1,3 Butadiene		54			
Isopentane		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			
Isopropylbenzene		120			
Nonanes		123			
Naphthalene		128			
Decanes+					
SUM Z_{Li} / x_T / x_i / M_T	1.00			1.00	

Note:

1 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:

   $\log P_2/P_1 = H_v/2.303R*(T_2-T_1/T_2T_1)$

   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 (T_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 $(Hv/2.303R)*(T_2-T_1)/T_2T_1$	Component Vapor Pressure at Crude Temperature (psia) **P_2**
Methane		3520	426.9			
Ethane		6349	770.1			
Propane		8071	978.9			
Isobutane		9136	1108.2			
N-Butane		9642	1169.5			
1,3 Butadiene		10025	1215.9			
Isopentane		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			
Isopropylbenzene		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:

$$P_i = P_2 * x_i$$

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 ($P_2 * x_i$) **P_i**	Component Mole Fraction in Vapor (P_i/P_{VA}) **y_i**
Methane				
Ethane				
Propane				
Isobutane				
N-Butane				
1,3 Butadiene				
Isopentane				
N-Pentane				
N-Hexane				
Hexane				
Benzene				
Heptanes				
2,2,4 Trimethylpentane				
Toluene				
Octanes				
Ethyl Benzene				
Xylenes				
Isopropylbenzene				
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:

$$M_v = \text{sum } (M_i * y_i)$$

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:

$$Z_{vi} = (M_i * y_i)/M_v$$

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 Mi*yi) **M_v**	Component Weight Fraction in Vapor (M_i*y_i/M_v) **Z_{vi}**
Methane	16			
Ethane	30			
Propane	44			
Isobutane	58			
N-Butane	58			
1,3 Butadiene	54			
Isopentane	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			
Isopropylbenzene	120			
Nonanes	123			
Naphthalene	128			
Decanes+				
y_i SUM / M_v / Z_{vi}SUM		1.00		1.00

Procedure for Determining HAP Content of Fuel Gas

I. Sample Description/Comments

3. Sample location _____
4. Sample Date _____
5. Sample ID _____
6. Sample representative of fuel gas used at Pump Station 1.

II. Determine Component Mole Fractions in Liquid Crude

Methodology Assumptions/Comments:

1. First, the fuel gas molecular weight is determined by summing the product of the component's molecular weight and mole fraction.
2. The component weight fraction is then determined by dividing the product of the component molecular weight and mole fraction by the calculated gas molecular weight.

Fuel Gas Analysis Data		Calculated Component Weight Fraction		
Component **i**	Component Mole Fraction in Fuel Gas (mole %100) $\mathbf{Y_{vi}}$	Component Molecular Weight $\mathbf{M_T}$	Calculate Fuel Gas Molecular Weight (sum M_i*y_i) $\mathbf{M_v}$	Component Weight Fraction in Fuel Gas (M_i*y_i/M_v) $\mathbf{Z_i}$
Oxygen		32.0		
Carbon Dioxide		44.0		
Nitrogen		28.0		
Methane		16.0		
Ethane		30.1		
Propane		44.1		
Isobutane		58.1		
N-Butane		58.1		
1,3 Butadiene		54.1		
Isopentane		72.2		
N-Pentane		72.2		
N-Hexane		86.0		
Hexanes+		85.6		
Benzene		78.0		
2,2,4 Trimethylpentane		114.2		
Toluene		92.0		
Ethyl Benzene		106.0		
Xylenes		106.0		
Isopropylbenzene		120.2		
Naphthalene		128.2		
y_i SUM / M_v / Z_i SUM	1.00			1.00

Estimated Actual HAP Emissions – Flaring of Crude Tank Vapors Pump Station 1

1. From the HAP speciation methodology from AP-42, Section 7.1.4, the loss rate of each component (in this case, the flow rate of the component to the flare) is given by:

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

2. The HAC emission rate is then determined by accounting for the flare destruction efficiency of 98.5%.

3. From the measurements of the total flared gas using Mass Meter 137 and after backing out the known flow rate and composition of the fuel gas (meters F150 and F27), the Total Mass of Flared Crude Vapors are: _____ lb/yr

_____ tpy

Calculation of Component Emission Rates					
Component **i**	Component Weight Fraction in Vapor $\mathbf{Z_{Vi}}$	Mass of Flared Crude Vapors $\mathbf{L_T}$ (tpy)	Component Mass Flow Rate $\mathbf{L_{Ti}}$ (tpy)	Flare Destruction Efficiency (%)	Total HAP Emission Rate $\mathbf{L_{HAP}}$ (tpy)
Methane				98.5	N/A
Ethane				98.5	N/A
Propane				98.5	N/A
Isobutane				98.5	N/A
N-Butane				98.5	N/A
1,3 Butadiene				98.5	
Isopentane				98.5	N/A
N-Pentane				98.5	N/A
N-Hexane				98.5	
Hexane				98.5	N/A
Benzene				98.5	
Heptanes				98.5	N/A
2,2,4 Trimethylpentane				98.5	
Toluene				98.5	
Octanes				98.5	N/A
Ethyl Benzene				98.5	
Xylenes				98.5	
Isopropylbenzene				98.5	
Nonanes				98.5	N/A
Naphthalene				98.5	
Decanes+				98.5	N/A
Z_{Vi} SUM /L_{Ti} SUM / L_{HAP} SUM					

Estimated Actual HAP Emissions – Flaring of Fuel Gas Pump Station 1

1. From the HAP speciation methodology from AP-42, Section 7.1.4, the loss rate of each component (in this case, the flow rate of the component to the flare) is given by:

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

2. The HAC emission rate is then determined by accounting for the flare destruction efficiency of 98.5%.

3. From the measurements of the meters F27 and F150, the Total Mass of Flared Fuel Gas is:
_____ lb/yr

_____ tpy

Calculation of Component Emission Rates					
Component **i**	Component Weight Fraction in Vapor $\mathbf{Z_{Vi}}$	Mass of Flared Fuel Gas $\mathbf{L_T}$ (tpy)	Component Mass Flow Rate $\mathbf{L_{Ti}}$ (tpy)	Flare Destruction Efficiency (%)	Total HAP Emission Rate $\mathbf{L_{HAP}}$ (tpy)
Methane				98.5	N/A
Ethane				98.5	N/A
Propane				98.5	N/A
Isobutane				98.5	N/A
N-Butane				98.5	N/A
1,3 Butadiene				98.5	
Isopentane				98.5	N/A
N-Pentane				98.5	N/A
N-Hexane				98.5	
Hexane				98.5	N/A
Benzene				98.5	
Heptanes				98.5	N/A
2,2,4 Trimethylpentane				98.5	
Toluene				98.5	
Octanes				98.5	N/A
Ethyl Benzene				98.5	
Xylenes				98.5	
Isopropylbenzene				98.5	
Nonanes				98.5	N/A
Naphthalene				98.5	
Decanes+				98.5	N/A
Z_{Vi} SUM /L_{Ti} SUM / L_{HAP} SUM					

Estimated Actual HAP Emissions – Flare (Products of Combustion) Pump Station 1

Actual Flow Rate: _____ MMscf/yr

Chemical Name	Emission Factor	Estimated Emissions
Acetaldehyde	4.3E-02 lb/MMscf	_____
Acrolein	1.0E-02 lb/MMscf	_____
Benzene	1.59E-01lb/MMscf	_____
Ethylbenzene	1.44E+00lb/MMscf	_____
Formaldehyde	1.17E+00lb/MMscf	_____
Hexane	2.90E-02 lb/MMscf	_____
Naphthalene	1.10E-02 lb/MMscf	_____
Toluene	5.80E-02 lb/MMscf	_____
Xylenes (isomers and mixture)	2.90E-02 lb/MMscf	_____
Polycyclic Organic Matter	1.40E-02 lb/MMscf	_____

[Permit No. AQ0072CPT02, 10/28/05]
[18 AAC 50.040(j); 18 AAC 50.326(j)]
[40 C.F.R. 71.6(a)]

Section 12. Visible Emissions Forms

VISIBLE EMISSIONS OBSERVATION FORM

This form is designed to be used in conjunction with EPA Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources." Temporal changes in emission color, plume water droplet content, background color, sky conditions, observer position, etc. should be noted in the comments section adjacent to each minute of readings. Any information not dealt with elsewhere on the form should be noted under Additional Information. Following are brief descriptions of the type of information that needs to be entered on the form. For a more detailed discussion of each part of the form, refer to "Instructions for Use of Visible Emission Observation Form" (a copy is available in https://www3.epa.gov/ttnemc01/methods/webinar8.pdf).

- Source Name: full company name, parent company or division or subsidiary information, if necessary.
- Address: street (not mailing or home office) address of facility where visible emissions observation is being made.
- Phone (Key Contact): number for appropriate contact.
- Stationary Source ID Number: number from NEDS, agency file, etc.
- Process Equipment, Operating Mode: brief description of process equipment (include type of facility) and operating rate, % capacity, and/or mode (e.g. charging, tapping, shutdown).
- Control Equipment, Operating Mode: specify type of control device(s) and % utilization, control efficiency.
- Describe Emission Point: for identification purposes, stack or emission point appearance, location, and geometry; and whether emissions are confined (have a specifically designed outlet) or unconfined (fugitive).
- Height Above Ground Level: stack or emission point height relative to ground level; can use engineering drawings, Abney level, or clinometer.
- Height Relative to Observer: indicate height of emission point relative to the observation point.
- Distance from Observer: distance to emission point; can use rangefinder or map.
- Direction from Observer: direction plume is traveling from observer.
- Describe Emissions and Color: include physical characteristics, plume behavior (e.g., looping, lacy, condensing, fumigating, secondary particle formation, distance plume visible, etc.), and color of emissions (gray, brown, white, red, black, etc.). Note color changes in comments section.
- Visible Water Vapor Present?: check "yes" if visible water vapor is present.
- If Present, note in the Comments column whether the Plume is "attached" if water droplet plume forms prior to exiting stack, and "detached" if water droplet plume forms after exiting stack.
- Point in Plume at Which Opacity was Determined: describe physical location in plume where readings were made (e.g., 1 ft above stack exit or 10 ft. after dissipation of water plume).
- Describe Plume Background: object plume is read against, include texture and atmospheric conditions (e.g., hazy).
- Background Color: sky blue, gray-white, new leaf green, etc.
- Sky Conditions: indicate color of clouds and cloud cover by percentage or by description (clear, scattered, broken, overcast).
- Wind Speed: record wind speed; can use Beaufort wind scale or hand-held anemometer to estimate.
- Wind Direction From: direction from which wind is blowing; can use compass to estimate to eight points.
- Ambient Temperature: in degrees Fahrenheit or Celsius.
- Wet Bulb Temperature: can be measured using a sling psychrometer
- RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
- Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.
- Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.
- Sun's Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen's shadow crosses the observer's position.
- Observation Date: date observations conducted.
- Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
- Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.
- Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.
- Range of Opacity: note highest and lowest opacity number.
- Observer's Name: print in full.
- Observer's Signature, Date: sign and date after performing VE observation.
- Observer's Affiliation: observer's employer.
- Certifying Organization, Certified By, Date: name of "smoke school," certifying observer, and date of most recent certification.

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

Emission Unit Location

City | State | Zip

Phone # (Key Contact) | Stationary Source ID Number

Process Equipment | Operating Mode

Control Equipment | Operating Mode

Describe Emission Point/Location

Height above ground level | Height relative to observer | Clinometer Reading

Distance From Observer: Start / End | Direction From Observer: Start / End

Describe Emissions & Color: Start / End

Visible Water Vapor Present? If yes, determine approximate distance from the stack exit to where the plume was read — No / Yes

Point in Plume at Which Opacity Was Determined

Describe Plume Background: Start / End | Background Color: Start / End

Sky Conditions: Start / End

Wind Speed: Start / End | Wind Direction From: Start / End

Ambient Temperature | Wet Bulb Temp | RH percent

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

Min \ Sec	0	15	30	45	Comments
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Additional Information:

Range of Opacity: Minimum / Maximum

I have received a copy of these opacity observations

Print Name:

Signature:

Print Observer's Name

Observer's Signature | Date

Observer's Affiliation:

Title | Date

Certifying Organization:

Certified By: | Date

Data Reduction:

Duration of Observation Period (minutes):

Number of Observations:

Number of Observations exceeding 20%:

In compliance with six-minute opacity limit? (Yes or No)

Duration Required by Permit (minutes):

Highest Six–Minute Average Opacity (%):

Highest 18-Consecutive –Minute Average Opacity (%)(engines and turbines only)

Average Opacity Summary:

Set Number	Time: Start	Time: End		Opacity: Sum	Opacity: Average	Comments

Section 13. Notification Form[27]

Trans Alaska Pipeline System – Pump Station 1 **AQ0072TVP04**

Stationary Source Name **Air Quality Permit Number.**

Alyeska Pipeline Service Company

Company Name

When did you discover the Excess Emissions/Permit Deviation?

Date: ____/____/____ Time: ____:____

When did the event/deviation occur?

Begin: Date: ____/____/____ Time: ____:____ (please use 24-hr clock)

End: Date: ____/____/____ Time: ____:____ (please use 24-hr clock)

What was the duration of the event/deviation? ____:____ (hrs:min) or ____days

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

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

☐ Excess Emissions - Complete Section 1 and Certify

Note: All "excess emissions" are also "permit deviations." However, use only Section 1 for events that involve excess emissions.

☐ Deviation from Permit Conditions - Complete Section 2 and Certify

Note: Use only Section 2 for permit deviations that do not involve excess emissions.

☐ Deviation from COBC[28], CO[29], or Settlement Agreement - Complete Section 2 and Certify

[27] Revised as of July 22, 2020.

[28] Compliance Order By Consent

[29] Compliance Order

Section 1. Excess Emissions

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

(b) **Cause of Event** (Check one that applies. Complete a separate form for each event, as applicable.):

☐Start Up/Shut Down
☐Natural Cause (weather/earthquake/flood)
☐Control Equipment Failure
☐Scheduled Maintenance/Equipment Adjustments
☐Bad fuel/coal/gas
☐Upset Condition
☐Other _____

(c) **Description**

Describe briefly what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance. Attach supporting information if necessary.

(d) **Emissions Units (EU) Involved:**

Identify the emissions units involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

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

(e) **Type of Incident:** (Please check all that apply and provide the value requested, if any):

- ☐ Opacity _____%
- ☐ Control Equipment Down
- ☐ Emission Limit Exceeded
- ☐ Flaring
- ☐ Other**:** _____
- ☐ Venting _____(gas/scf)
- ☐ Fugitive Emissions
- ☐ Marine Vessel Opacity

(f) **Corrective Actions:**

Describe actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence. Attach supporting information if necessary.

(g) **Unavoidable Emissions:**

Do you intend to assert that these excess emissions were unavoidable? ☐YES ☐NO

Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐YES ☐NO

Certify Report (<u>go to end of form</u>)

Section 2. Permit Deviations

(a) **Permit Deviation Type:** (Check all boxes that apply per event. Complete a separate form for each event, as applicable.)

- ☐ Emissions Unit-Specific Requirements
- ☐ Stationary Source-Wide Specific Requirements
- ☐ Monitoring/Recordkeeping/Reporting Requirements
- ☐ General Source Test Requirements
- ☐ Compliance Certification Requirements
- ☐ Standard/Generally Applicable Requirements
- ☐ Insignificant Emissions Unit Requirements
- ☐ Other: _____

(b) **Emissions Units (EU) Involved:**

Identify the emissions units involved in the event, using the same identification number and name as in the permit. List the corresponding permit condition and the deviation.

EU ID	EU Name	Permit Condition /Potential Deviation

(c) **Description of Potential Deviation:**

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation. Attach supporting information if necessary.

(d) **Corrective Actions:**

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence. Attach supporting information if necessary.

Certification:

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

Printed Name:_____Title_____Date _____

Signature:_____ Phone number_____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j). Read and sign the certification in the bottom of the form above. (See Condition 74.)*

Submit this report in accordance with the submission instructions on the Department's Standard Permit Conditions web page at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-iii-and-iv-submission-instructions/.

If submitted online, report must be submitted by an authorized E-signer for the stationary source (according to Condition 74).