

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

Permit No. AQ0079TVP05

Issue Date: Public Comment - August 16, 2024

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 (APSC)**, for the operation of **Trans-Alaska Pipeline System (TAPS) Pump Station 9 (PS-9)**.

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 Construction Permit Nos. AQ0079CPT02 and AQ0079CPT03 have been incorporated into this operating permit.

Upon effective date of this permit, Operating Permit No. AQ0079TVP04 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	MMscf.....	million standard cubic feet
AAQS	Ambient Air Quality Standards	MR&R	monitoring, recordkeeping, and reporting
ADEC	Alaska Department of Environmental Conservation	NAICS.....	North American Industrial Classification System
Administrator.....	EPA and the Department.	NESHAP	National Emission Standards for Hazardous Air Pollutants [as contained in 40 C.F.R. 61 and 63]
AOS	Air Online Services	NH ₃	ammonia
APSC	Alyeska Pipeline Service Company	NO _x	nitrogen oxides
AS.....	Alaska Statutes	N ₂ O.....	Nitrous Oxide
ASTM.....	American Society for Testing and Materials	NSPS	New Source Performance Standards [as contained in 40 C.F.R. 60]
BACT	best available control technology	O & M	operation and maintenance
bHp	brake horsepower	O ₂	oxygen
CDX.....	Central Data Exchange	PAL	plantwide applicability limitation
CEDRI.....	Compliance and Emissions Data Reporting Interface	Pb	lead
C.F.R.	Code of Federal Regulations	PM.....	particulate matter
CAA or The Act	Clean Air Act	PM ₁₀	particulate matter less than or equal to a nominal 10 microns in diameter
CO	carbon monoxide	PM _{2.5}	particulate matter less than or equal to a nominal 2.5 microns in diameter
CO ₂ e	CO ₂ -equivalent	ppm	parts per million
Department	Alaska Department of Environmental Conservation	ppmv, ppmvd	parts per million by volume on a dry basis
dscf.....	dry standard cubic foot	psia	pounds per square inch (absolute)
EPA	US Environmental Protection Agency	PSD	prevention of significant deterioration
EU.....	emissions unit	PTE	potential to emit
EU ID	emissions unit identification number	SIC.	Standard Industrial Classification
GACT	Generally Available Control Technology	SIP.....	State Implementation Plan
GAPCP	Good Air Pollution Control Practice	SPC	Standard Permit Condition
GHG	Greenhouse Gas	SO ₂	sulfur dioxide
gr/dscf.....	grain per dry standard cubic foot (1 pound = 7000 grains)	TAPS	Trans-Alaska Pipeline System
gph.....	gallons per hour	tph	tons per hour
HAPs	hazardous air pollutants [as defined in AS 46.14.990]	TPY	tons per year
Hp	horsepower	VOC	volatile organic compound [as defined in 40 C.F.R. 51.100(s)]
kPa.....	kiloPascals	VOL	volatile organic liquid [as defined in 40 C.F.R. 60.111b, Subpart Kb]
LAER.....	lowest achievable emission rate	vol%	volume percent
MACT	maximum achievable control technology [as defined in 40 C.F.R. 63]	wt%	weight percent
MMBtu/hr.....	million British thermal units per hour	wt% _{fuel}	weight percent of sulfur in fuel

Section 1. Stationary Source Information

Identification

Permittee:	Alyeska Pipeline Service Company (APSC) P.O. Box 196660 Anchorage, AK 99519-6660	
Stationary Source Name:	Trans-Alaska Pipeline System (TAPS) Pump Station 9 (PS-9)	
Location:	63° 55' 53" North; 145° 45' 59" West	
Physical Address:	Section 27, T11S, R10E (MP 258 Richardson Hwy) Fairbanks Meridian, AK	
Owner:	Hilcorp Alaska, LLC; ConocoPhillips Transportation Alaska, Inc; ExxonMobile Pipeline Company	
Operator:	Alyeska Pipeline Service Company P.O. Box 196660 Anchorage, AK 99519-6660	
Permittee's Responsible Official:	Joey Shelby, Pipeline Director APSC 615 Bidwell Ave. DIF 240 Fairbanks, AK 99706	
Designated Agent:	CT Corporation 9360 Glacier Hwy Suite 202 Juneau, AK 99801	
Stationary Source and Building Contact:	Geneva Walters, Kyle MacDonald, PS-9 Maintenance Supervisor (907) 787-4902	
Fee Contact:	Michelle Slwooko, Environmental Coordinator APSC P.O. Box 196660, MS 507 Anchorage, AK 99519-6660 (907) 787-8906 michelle.slwooko@alyeska-pipeline.com	
Permit Contact:	Hilary Garney, Environment SME APSC P.O. Box 196660, MS 507 Anchorage, AK 99519-6660 (907) 787-8568 hilary.garney@alyeska-pipeline.com	
Process Description:	SIC Code	4612 Crude Oil 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 (EUs) 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.

Table A - Emissions Unit Inventory

EU ID	Tag Number	Emissions Unit Description	Fuel	Rating/Size	Installation or Construction Date
10	39-GEN-3810R	Caterpillar Electric Generator, Model # 3516B	Diesel	2,250 kWe	2005
11	39-GEN-3810R	Caterpillar Electric Generator, Model # 3516B	Diesel	2,250 kWe	2005
12 ¹	39-GEN-4605R	John Deere Engine Electric Generator, Model # 4045	Diesel	65 kWe	2005
13	TK-190	Breakout Tank 190	N/A	55,000 barrels	1975

Notes:

1. EU ID 12 actual emissions are historically less than the significant thresholds under 18 AAC 50.326(e) but cannot be classified as insignificant per 18 AAC 50.326(d)(1)(A) and (C).

[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 10 through 12 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 each of EU IDs 10 through 12, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e)¹ during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 56 for the visible emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 55 if any of EU IDs 10 through 12 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.

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

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

Liquid Fuel-Burning Equipment

- 2. Visible Emissions Monitoring.** When required by Condition 1.1, or in the event of replacement² during the permit term, the Permittee shall observe the exhaust of EU IDs 10 through 12 for visible emissions using the Method 9 Plan under Condition 2.2.
 - 2.1. The Permittee may for 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.³
 - a. First Method 9 Observation. Except as provided in Condition 2.1, observe the exhausts of EU IDs 10 through 12 according to the following criteria:
 - (i) Except as provided in Condition 2.2.a(ii) and 2.2.a(iii), for any of EU IDs 10 through 12, observe exhaust within six months after the effective date of this permit.

¹ The significant emissions thresholds are equivalent to 55 operational hours for each of EU IDs 10 and 11, and 1,480 operational hours for EU ID 12, per rolling 12-month period.

² "Replacement," as defined in 40 C.F.R. 51.166(b)(32).

³ Visible emissions observations are not required during emergency operations.

- (ii) For any unit replaced, observe exhaust within 60 days of the newly installed emissions unit becoming fully operational.⁴ Except as provided in Condition 2.2.e, after the First Method 9 observation:
 - (A) For EU IDs 10 through 12, continue with the monitoring schedule of the replaced emissions unit; and
 - (iii) For each of EU IDs 10 through 12, observe the exhaust of the emissions unit within 30 days after the end of the calendar month during which monitoring was triggered under Condition 1.1; 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.
 - 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.

⁴ "Fully operational" means upon completion of all functionality checks and commissioning after unit installation. "Installation" is complete when the unit is ready for functionality checks to begin.

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 may be kept in electronic format.

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

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

- 4.1. In the first operating report required in Condition 55 under this permit term, the Permittee shall state the intention to either continue the visible emissions monitoring schedule in effect from the previous permit or reset the visible emissions monitoring schedule.
- 4.2. Include in each operating report required under Condition 55 for the period covered by the report
 - a. which visible emissions plan of Condition 2 was used for each emissions unit; if more than one plan was used, give the time periods covered by each plan;
 - b. for all Method 9 Plan observations:
 - (i) copies of the observation results (i.e., opacity observations) for each emissions unit, except for the observations the Permittee has already supplied to the Department; and
 - (ii) a summary to include:
 - (A) number of days observations were made;
 - (B) highest six-consecutive- and 18-consecutive-minute average opacities observed; and
 - (C) dates when one or more observed six-consecutive-minute average opacities were greater than 20 percent;
 - c. a summary of any monitoring or recordkeeping required under Conditions 2 and 3 that was not done.
- 4.3. Report under Condition 54
 - a. the results of Method 9 observations that exceed 20 percent average opacity for any six-consecutive-minute period; and
 - b. if any monitoring under Condition 2 was not performed when required, report within three days of the date that the monitoring was required.

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

Particulate Matter (PM) Emissions Standard

5. **Industrial Process and Fuel-Burning Equipment PM Emissions.** The Permittee shall not cause or allow particulate matter emitted from EU IDs 10 through 12 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)]

- 5.1. For each of EU IDs 10 through 12, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e)⁵ during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 56 for the PM emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 55 if any of EU IDs 10 through 12 reaches any of the significant emissions thresholds and monitor, record, and report in accordance with Conditions 6 through 8 for the remainder of the permit term for that emissions unit.

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

PM MR&R

Liquid Fuel-Burning Engines

6. **PM Monitoring.** When required by Condition 5.1, the Permittee shall conduct source tests on EU IDs 10 through 12, 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)]

- 6.1. If the result of any Method 9 observation conducted under Condition 2.2 for any of EU IDs 10 through 12 is greater than the criteria of Condition 6.2.a or Condition 6.2.b, 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 6.2; or
 - b. except as exempted in Condition 6.4, conduct a PM source test according to requirements set out in Section 6.
- 6.2. Take corrective action or conduct a PM source test, in accordance with Condition 6.1, if any Method 9 observation under Condition 2.2 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.

⁵ The significant emissions thresholds are equivalent to 55 operational hours for each of EU IDs 10 and 11 and 1,480 operational hours for EU ID 12, per rolling 12-month period.

- 6.3. During each one-hour PM source test run under Condition 6.1.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.
- 6.4. The PM source test requirements in Condition 6.1.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 2.2) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 6.2.

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

- 7.1. Keep records of the results of any source test and visible emissions observations conducted under Condition 6.

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

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

- 8.1. Notify the Department of any Method 9 observation results that are greater than the threshold of either Condition 6.2.a or Condition 6.2.b within 30 days of the end of the month in which the observations occurred. Include the dates, EU ID(s), and results when an observed 18-minute average opacity was greater than an applicable threshold in Condition 6.2.
- 8.2. In each operating report under Condition 55, include:
 - a. a summary of the results of any PM source test and visible emissions observations conducted under Condition 6; and
 - b. copies of any visible emissions observation results greater than the thresholds of Condition 6.2, if they were not already submitted.
- 8.3. Report in accordance with Condition 54
 - a. anytime the results of a PM source test exceed the PM emissions standard in Condition 5; or
 - b. if the requirements under Condition 6.1 were triggered and the Permittee did not comply on time with either Condition 6.1.a or 6.1.b. Report the deviation within 24 hours of the date compliance with Condition 6.1 was required.

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

Sulfur Compound Emissions Standard

9. **Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from EU IDs 10 through 12 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

- 9.1. For EU IDs 10 through 12, to ensure compliance with Condition 9, the Permittee shall comply with the fuel sulfur content limit of 0.24 percent by weight (wt%*S*_{fuel}) and associated MR&R requirements in Condition 11.

[Condition 3, Construction Permit No. AQ0079CPT02, 3/11/05]
[18 AAC 50.040(j)(4) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]

Preconstruction Permit⁷ Requirements

Owner Requested Limits (ORLs) to Protect Ambient Air Quality Standards (AAQS), EU IDs 10 – 12

10. **Operational Hour Limits.** The Permittee shall restrict the 12-consecutive month total operating hours of EU IDs 10 through 12 to no more than the limits listed in Table B to protect AAQS and increments for NO_x, SO₂, and PM₁₀. Monitor, record, and report in accordance with Conditions 10.1 through 10.3.

Table B – Operating Hour Limits

EU ID	12-Consecutive Month Hourly Limit, in hours
10 and 11, combined	11,200 per 12 consecutive months
12	300 per 12 consecutive months

- 10.1. By the last day of each calendar month, calculate and record the monthly and consecutive 12-month total operating hours for the previous month for EU IDs 10 and 11 (combined) and for EU ID 12.
- 10.2. Report as described in Condition 54 if the consecutive 12-month total operating hours calculated in Condition 10.1 exceed any of the limits in Table B.
- 10.3. Include copies of the records required under Condition 10.1 with the operating report described in Condition 55 for the period covered by the report.

[Condition 2, Construction Permit No. AQ0079CPT02, 3/11/05]

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.

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.

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

11. Fuel Sulfur Content Limit. The Permittee shall limit the sulfur content of diesel fuel burned in EU IDs 10 through 12 to no more than 0.24 wt% S_{fuel} . Monitor, record, and report as follows:

- 11.1. The Permittee shall do one of the following for each shipment of fuel:
- a. If the fuel grade requires a sulfur content of 0.24 wt% S_{fuel} or less, keep receipts that specify fuel grade and amount; or
 - b. If the fuel grade does not require a sulfur content of 0.24 wt% S_{fuel} or less, keep receipts that specify fuel grade and amount, and
 - (i) test the fuel sulfur content; or
 - (ii) obtain test results showing the sulfur content of the fuel from the supplier or refinery; the test results must include a statement signed by the supplier or refinery of what fuel they represent.
- 11.2. Fuel testing under Condition 11.1.b must follow an appropriate method listed in 18 AAC 50.035(b)-(c) or 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).
- 11.3. The Permittee shall include in the operating report required by Condition 55:
- a. a list of the fuel grades received at the stationary source during the reporting period; and
 - b. copies of any test results obtained in accordance with Condition 11.1.b.
- 11.4. Report according to Condition 54 any time the diesel fuel sulfur content exceeds 0.24 wt% S_{fuel} .

[Condition 3, Construction Permit No. AQ0079CPT02, 3/11/05]
[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & (c)(6)]

ORLs to Avoid PSD-Major Modification, EU IDs 10 – 12

12. Oxides of Nitrogen (NO_x) Limit. To avoid project classification as PSD-Major for NO_x, the Permittee shall comply with operating hour limits for EU IDs 10 through 12 as listed in Table B.

- 12.1. Monitor, record, and report in accordance with Conditions 10.1 through 10.3.

[Condition 4, Construction Permit No. AQ0079CTP02, 3/11/05]
[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1), (a)(3), & (c)(6)]

ORLs to Avoid Classification as a HAP Major, EU ID 13

13. Hazardous Air Pollutant (HAP) Limit. To avoid classification as a HAP Major Stationary Source under 18 AAC 50.316, the Permittee shall limit HAP emissions from the crude oil breakout tank, EU ID 13 (TK-190), to no more than 8.5 tons per 12-month rolling period for any individual HAP and 17.8 tons per 12-month rolling period for the aggregate total of HAPs.

[Condition 1, Construction Permit No. AQ0079CPT03, 10/28/05]
[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

13.1. The Permittee shall monitor and record compliance with Condition 13 as follows:

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

- a. Sample the discharge crude stream at Pump Station 1 (PS-1) once every twelve calendar months⁸.
 - (i) Sampling under Condition 13.1.a is not required if the Permittee is satisfying the crude oil sampling requirements for HAP ORLs at another TAPS pump station.

[Condition 2.1, Construction Permit No. AQ0079CPT03, 10/28/05]

- b. 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 using ASTM Method D-5134M.

[Condition 2.2, Construction Permit No. AQ0079CPT03, 10/28/05]

- c. Determine the flow rate data of the crude oil routed to EU ID 13.
 - (i) Monitor and record tank level changes at least once per hour.
 - (ii) Monitor and calculate the monthly total volume of crude oil routed to EU ID 13 using tank level change indicators.
 - (iii) For any period during which crude oil flow data is unavailable under Condition 13.1.c(ii), the Permittee shall estimate the flow rate of crude oil to EU ID 13 using a crude oil flow rate of 3,500,000 barrels per year, prorated over the time period during which no data is available⁹.

[Conditions 2.3 & 2.4, Construction Permit No. AQ0079CPT03, 10/28/05]

- d. Calculate and record the monthly and 12-month rolling total HAP emissions from EU ID 13 for the previous month using
 - (i) the most recent crude oil composition analysis in Condition 13.1.b;

⁸ The Permittee has satisfied the quarterly and semi-annual sampling requirements of Construction Permit No. AQ0079CPT03.

⁹ The pro-ration calculation for periods when no data is available does not apply to periods when the tank is drained and isolated.

- (ii) the total volume of crude oil routed to EU ID 13 for the month determined from Condition 13.1.c(ii) or 13.1.c(iii); and
 - (iii) the methodology described in Section 11.
[Conditions 2.5, 2.5a, & 2.5d, Construction Permit No. AQ0079CPT03, 10/28/05]
- e. At the end of each calendar month, perform calculations as described in Condition 13.1.d for at least six months, except as specified under Condition 13.1.h.
[Conditions 2.5c & 2.5d, Construction Permit No. AQ0079CPT03, 10/28/05]
- f. If HAP emissions calculations in Condition 13.1.e show less than 50 percent of each limit in Condition 13, the Permittee may reduce frequency of calculations from monthly to semi-annual, coinciding with the time the operating report required under Condition 55 is due, to include the six months covered by the report.
[Condition 2.5e, Construction Permit No. AQ0079CPT03, 10/28/05]
- g. If the most recent calculations for any 12-month rolling period show HAP emissions exceed 50 percent of either limit in Condition 13, continue to calculate and record the 12-month rolling total HAP emissions on a monthly basis, as described in Condition 13.1.e.
[Condition 2.5d, Construction Permit No. AQ0079CPT03, 10/28/05]
- h. If the most recent calculations for any 12-month rolling period show HAP emissions exceed 90 percent of either limit in Condition 13, the Permittee shall:
 - (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 Method 2286 on the headspace of any one of the breakout tanks at Pump Stations (PS) 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;
 - (iii) for crude oil sampling, take at least two crude oil discharge samples at PS-1, within 15 days of headspace sampling; and
 - (iv) use the average results of the sampling conducted under Conditions 13.1.h(ii) and 13.1.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, sample crude oil once every 12

calendar months and calculate the HAP emissions according to Condition 13.1.d;

- (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 13.1.d and multiply all results by the ratio between test results from Conditions 13.1.h(ii) and 13.1.h(iii). When HAP emissions fall below 90 percent, the Permittee may reduce sampling frequency to once every 12 calendar months and calculate HAP emissions according to Condition 13.1.d. The Permittee shall continue to multiply the results by the ratio determined between test results from Conditions 13.1.h(ii) and 13.1.h(iii).

[Condition 2.6, Construction Permit No. AQ0079CPT03, 10/28/05]

13.2. The Permittee shall report as follows:

- a. Report under the operating report in Condition 55 the following information:
- (i) the results of any crude oil sample analysis obtained under Condition 13.1.b 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 Conditions 13.1.d and 13.1.g.
- b. Report under excess emission and permit deviation reports in Condition 54, if:
- (i) the 12-month rolling total individual HAP emissions from EU ID 13 exceeds the limit in Condition 13;
 - (ii) the 12-month rolling total aggregate HAP emissions from EU ID 13 exceeds the limit in Condition 13; or
 - (iii) the monitoring, recordkeeping, or reporting requirements are not in accordance with Conditions 13.1.a through 13.1.g.

[Condition 3, Construction Permit No. AQ0079CPT03, 10/28/05]

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

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

Insignificant Emissions Units

14. 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:

- 14.1. **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)]

- 14.2. **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)]

- 14.3. **Sulfur Compound Standard:** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c)]

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

- a. Submit the compliance certifications of Condition 56 based on reasonable inquiry;
- b. Comply with the requirements of Condition 37;
- c. Report in the operating report required by Condition 55 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 14.1, 14.2, and 14.3.

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

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

Section 4. Federal Requirements

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

NESHAP Subpart A – General Provisions

- 15. 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 NESHAP Subpart ZZZZ for EU IDs 10 through 12 listed in Table A.

[18 AAC 50.040(c)(1) & (23), 50.040(j)(4) and 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 ZZZZ¹⁰ – Stationary CI RICE, EU IDs 10 through 12

- 16. NESHAP Subpart ZZZZ Applicability.** The Permittee shall comply with applicable requirements for existing¹¹ emergency (EU IDs 10 and 11) and non-emergency (EU ID 12)¹² compression ignition (CI) stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions.

- 16.1. For EU IDs 10 through 12, existing stationary RICE units, the Permittee shall at all times comply with Conditions 17 through 21.

[18 AAC 50.040(c)(23) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (a)(3)]
[40 C.F.R. 63.6585(c), 63.6590(a)(1)(iii), and 63.6605(a), Subpart ZZZZ]

- 17. NESHAP Subpart ZZZZ GAPCP, Operation and Maintenance Requirements.** The Permittee shall comply with the following:

[18 AAC 50.040(c)(23) & (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (3)(i)]

- 17.1. At all times, operate and maintain EU IDs 10 through 12, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of EU IDs 10 through 12.

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

¹⁰ The provisions of NESHAP Subpart ZZZZ listed in Conditions 16 through 21 are current as amended through May 30, 2023. 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.

¹¹ In accordance with 40 C.F.R. 63.6590(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.

¹² The Permittee requested for reclassification of EU ID 12 from emergency to non-emergency CI RICE under this renewal Title V Operating Permit No. AQ0079TVP05.

17.2. 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 instructions for operation and maintenance; or
- b. a maintenance plan developed by the Permittee which must provide, to the extent practicable, for the maintenance and operation of the engine(s) 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]

17.3. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

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

18. NESHAP Subpart ZZZZ Work and Management Practices Standards. For EU IDs 10 through 12, the Permittee shall comply with the following work and management practices:

[18 AAC 50.040(c)(23) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (3)(i)]

18.1. For EU IDs 10 and 11:

- a. Except during periods of startup, the Permittee shall meet the following requirements:
 - (i) Change oil and filter every 500 hours of operation or annually, whichever comes first;
 - (ii) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
 - (iii) 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) and Table 2d (item 4), Subpart ZZZZ]

18.2. For EU ID 12:

- a. Except during periods of startup, the Permittee shall meet the following requirements:
 - (i) Change oil and filter every 1,000 hours of operation or annually, whichever comes first;
 - (ii) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
 - (iii) 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) and Table 2d (item 1), Subpart ZZZZ]

- 18.3. During periods of startup, the Permittee shall comply with Condition 17.3.
[40 C.F.R. 63.6603(a), 63.6625(h), and Table 2d (item 1 & 4), Subpart ZZZZ]
- 18.4. If any of emergency engines, EU IDs 10 or 11, is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required under Condition 18.1, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated.
[40 C.F.R. 63, Footnote 2 to Table 2d, Subpart ZZZZ]
- 18.5. Demonstrate continuous compliance with the requirements in Conditions 18.1 through 18.3, by complying with Condition 17.2.
[40 C.F.R. 63.6640(a) & Table 6 (item 9), Subpart ZZZZ]
- 18.6. The Permittee has the option to utilize an oil analysis program in order to extend the specified oil change requirements in Conditions 18.1.a(i) and 18.2.a(i), as described below:
- a. The oil analysis must be performed at the same frequency specified for changing the oil in Conditions 18.1.a(i) and 18.2.a(i).
 - 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.
 - c. If all of the condemning limits in Conditions 18.6.b(i) through 18.6.b(iii) are not exceeded, the Permittee is not required to change the oil.
 - d. If any of the limits in Conditions 18.6.b(i) through 18.6.b(iii) is exceeded, the Permittee must change the oil within 2 business days of receiving the results of the analysis.
 - (i) If the engine is not in operation when the results of the analysis are received, the Permittee must change the oil within 2 business days or before commencing operation, whichever is later.
 - e. The analysis program must be part of the maintenance plan for the engine.
[40 C.F.R. 63.6625(i) and Table 2d (Footnote 1), Subpart ZZZZ]

19. NESHAP Subpart ZZZZ Monitoring Requirements. For each of the existing emergency stationary CI RICE, EU IDs 10 and 11, the Permittee shall comply with the following:

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

19.1. Monitor the operating time using the non-resettable hour meter installed on the unit.

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

19.2. Operate according to the requirements in Conditions 19.3.a through 19.3.c.

- a. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in Conditions 19.3.a through 19.3.c, is prohibited.
- b. If the Permittee does not operate the engine according to the requirements in Conditions 19.3.a through 19.3.c, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

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

19.3. The Permittee may operate the emergency stationary RICE for maintenance checks and readiness testing, as specified in Condition 19.3.b, for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 19.3.c counts as part of the 100 hours per calendar year allowed by this condition.

- a. There is no time limit on the use of the emergency engines in emergency situations.
- b. The Permittee may operate the emissions units for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of these units is limited to 100 hours per calendar year. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.
- c. The Permittee may operate the emissions units up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing under Condition 19.3.b. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[40 C.F.R. 63.6640(f)(1), (2), (2)(i), & (3), Subpart ZZZZ]

20. NESHAP Subpart ZZZZ Recordkeeping Requirements. The Permittee shall keep records, as follows:

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

- 20.1. For EU IDs 10 through 12, keep records of the maintenance conducted 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 17.2.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 18.6.

[40 C.F.R. 63.6655(e)(2) & (3) and 63.6625(i), Subpart ZZZZ]

- 20.2. For EU IDs 10 and 11, keep records of the hours of operation recorded through the non-resettable hour meter including:

- a. the calendar year total number of hours spent for emergency operation, including what classified the operation as emergency; and
- b. the calendar year total number of hours spent for non-emergency operation.

[40 C.F.R. 63.6655(f)(2), Subpart ZZZZ]

- 20.3. Keep records in a form suitable and readily available for expeditious review. Keep each record in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. 63.10(b)(1), except that all records may be retained off site.

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

21. NESHAP 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(a)(3)(iii) & (c)(6)]

- 21.1. Include in the operating report required by Condition 55 the following for the period covered by the report:

- a. a description of any failure to perform the management practice on the schedule required in Condition 18.1 as a result of operating under the emergency exception allowed by Condition 18.4; include a description of the emergency and/or a description of the Federal, State, or local law¹³ under which the risk of performing the management practice on the required schedule was deemed unacceptable.

[40 C.F.R. 63, Footnote 2 to Table 2d, Subpart ZZZZ]

¹³ The Permittee may provide the text of the law or a citation that the Department can use to access the law.

- b. a report of all deviations as defined in 40 C.F.R. 63.6675 and of each instance in which an applicable requirement in 40 C.F.R. 63, Subpart A (Table 8 to Subpart ZZZZ) was not met; and
[40 C.F.R. 63.6640(e) & 63.6650(f), Subpart ZZZZ]
- c. records of the operational hours of each of EU IDs 10 and 11 and the reason the engine was in operation as required in Condition 20.2.
[40 C.F.R. 71.6(c)(6)]

21.2. Notify the Department in accordance with Condition 54 if any of the requirements in Conditions 16 through 21 were not met.

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

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

Subpart A – General Provisions & Subpart M – Asbestos

22. 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 82 Protection of Stratospheric Ozone

23. **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]

24. **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]

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

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

NESHAP Applicability Determination Requirements

26. The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories (40 C.F.R. 63) in accordance with the procedures described in 40 C.F.R. 63.1(b).

- 26.1. 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).
- 26.2. 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).
- 26.3. 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

27. 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) and 50.345(a) & (e)]

28. 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) and 50.345(a) & (f)]

29. The permit does not convey any property rights of any sort, nor any exclusive privilege.

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

30. **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, and 50.403]
[AS 37.10.052(b) and AS 46.14.240]

31. **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. The quantity for which fees will be assessed is the lesser of the stationary source's:

31.1. potential to emit of 864 TPY; or

31.2. 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]

32. **Assessable Emission Estimates.** The Permittee shall comply as follows:

- 32.1. 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 31.2. 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/>.
- 32.2. 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.
- 32.3. If the stationary source has not commenced construction or operation on or before March 31st, the Permittee may submit to the Department's Anchorage office a waiver letter certified under 18 AAC 50.205 that states the stationary source's actual annual emissions for the previous calendar year are zero TPY and provides estimates for when construction or operation will commence.
- 32.4. If no estimate or waiver letter is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit in Condition 31.1.

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

33. Good Air Pollution Control Practice (GAPCP). The Permittee shall do the following for EU IDs 12 and 13:

- 33.1. Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;
- 33.2. Keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and
- 33.3. Keep a copy of either the manufacturer's or the operator's maintenance procedures.

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

34. 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)]

35. 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.

- 35.1. 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 35.1.a or to address the results of Department inspections that found potential problems; and
- (ii) to prevent future dust problems.

35.2. The Permittee shall report according to Condition 37.3.

[18 AAC 50.045(d), 50.326(j)(3), and 50.346(c)]

36. 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)]

37. 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), and 50.346(a)]
[40 C.F.R. 71.6(a)(3)]

37.1. **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 37.
- 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 37; or
 - (ii) the Department notifies the Permittee that it has found a violation of Condition 37.

37.2. **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 37; and
- d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

37.3. Reporting. The Permittee shall report as follows:

- a. With each stationary source operating report under Condition 55, 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 54.

38. 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 standard¹⁴ listed in Condition 23 (refrigerants), the Permittee shall

- 38.1. take all reasonable steps to minimize levels of emissions that exceed the standard; and
- 38.2. report in accordance with Condition 54.1.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

39. Open Burning. If the Permittee conducts open burning at this stationary source, the Permittee shall comply with the requirements of 18 AAC 50.065. The Permittee shall comply as follows:

¹⁴ 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.

39.1. Keep written records to demonstrate that the Permittee complies with the limitations in this condition and the requirements of 18 AAC 50.065. Upon request by the Department, submit copies of the records; and

39.2. Include this condition in the annual certification required under Condition 56.

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

Section 6. General Source Testing and Monitoring Requirements

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

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

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

[18 AAC 50.220(b)]

- 41.1. at a point or points that characterize the actual discharge into the ambient air; and
- 41.2. 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.

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

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

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

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

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

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

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

- 42.4. 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 and 50.220(c)(1)(D)]

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

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

42.6. Source testing for emissions of PM₁₀ 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]

42.7. 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]

43. 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) and 50.990(102)]

44. Test Exemption. The Permittee is not required to comply with Conditions 46, 47 and 48 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.2).

[18 AAC 50.345(a)]

45. 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)]

46. Test Plans. Except as provided in Condition 44, 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 40 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)]

47. Test Notification. Except as provided in Condition 44, 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)]

48. Test Reports. Except as provided in Condition 44, 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 51. 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)]

49. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in Conditions 5 and 14.2, the three-hour average is determined using the average of three one-hour test runs.

[18 AAC 50.220(f)]

Section 7. General Recordkeeping and Reporting Requirements

Recordkeeping Requirements

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

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

50.2. 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) & (j)(4) and 50.326(j)]
[40 C.F.R 60.7(f), Subpart A, 40 C.F.R 71.6(a)(3)(ii)(A) & (B)]

Reporting Requirements

51. 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.

51.1. 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)]

52. 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.

52.1. 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)]

53. 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)]

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

54.1. **Excess Emissions Reporting.** Except as provided in Condition 37, 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 54.1.d.
- d. Report all other excess emissions not described in Conditions 54.1.a, 54.1.b, and 54.1.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 55 for excess emissions that occurred during the period covered by the report, whichever is sooner.

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

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

54.2. Permit Deviations Reporting. For permit deviations that are not “excess emissions,” as defined under 18 AAC 50.990:

- a. Report according to the required deadline for failure to monitor, as specified in other applicable conditions of this permit (Conditions 4.3.b and 8.3.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 55 for permit deviations that occurred during the period covered by the report, whichever is sooner.

[18 AAC 50.326(j)(3) & 50.346(b)(2)]

54.3. Reporting Instructions. When reporting either excess emissions or permit deviations, the Permittee shall report using the Department’s online form for all such submittals, beginning no later than September 7, 2023. The form 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. Alternatively, upon written Department approval, the Permittee may submit 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), and 50.270(a), (b), & (c)]

55. Operating Reports. During the life of this permit¹⁵, the Permittee shall submit to the Department an operating report in accordance with Conditions 51 and 52 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.

- 55.1. 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.
- 55.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 55.1, the Permittee shall identify
 - a. the date of the excess emissions or permit deviation;
 - b. the equipment involved;
 - c. the permit condition affected;

¹⁵ *Life of this permit* is defined as the permit effective dates, including any periods of reporting obligations that extend beyond the permit effective dates. For example, if a permit expires prior to the end of a calendar year, there is still a reporting obligation to provide operating reports for the periods when the permit was in effect.

- d. 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
- 55.3. when excess emissions or permit deviation reports have already been reported under Condition 54 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.
- 55.4. The operating report must include, for the period covered by the report, a listing of emissions monitored under Conditions 2.2.e or 6.2, 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.
- 55.5. **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)]

56. 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 52.

- 56.1. 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.

56.2. **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.

56.3. 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)]

57. Emission Inventory Reporting. The Permittee shall submit to the Department reports of actual emissions for the previous calendar year, by emissions unit, of CO, NH₃, NO_x, PM₁₀, PM_{2.5}, SO₂, VOC, and lead (Pb) and lead compounds, as follows:

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

- a. 250 TPY of NH₃, PM₁₀, PM_{2.5} or VOC; or
- b. 2,500 TPY of CO, NO_x, or SO₂.

57.2. **Triennial inventory.** Every third year by April 30, if the stationary source's potential to emit does not meet any of the emission thresholds in Condition 57.1.

57.3. For reporting under Condition 57.2, the Permittee shall report the annual emissions and the required data elements under Condition 57.4 every third year for the previous calendar year as scheduled by the EPA.¹⁶

57.4. For each emissions unit and the stationary source, include in the report the required data elements¹⁷ 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>.

57.5. 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/>.

¹⁶ 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.).

¹⁷ 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.

58. Consistency of Reporting Methodologies. Regardless of permit classification, as of September 7, 2022, all stationary sources operating in the state shall report actual emissions to the Department, either upon request or to meet individual permit requirements, in order for the state to meet federal reporting requirements under 40 C.F.R. Part 51, Subpart A.

58.1. For the purposes of reporting actual or assessable emissions required under Condition 57 and Condition 31.2, the Permittee shall use consistent pollutant-specific emission factors and calculation methods for all reporting requirements for the stationary source.

[18 AAC 50.040(j)(4), 50.200, 50.275, 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]

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

59.1. **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 55 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.

59.2. **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)]

Section 8. Permit Changes and Renewal

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

- 60.1. 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;
- 60.2. The information shall be submitted, as follows: (1) to the EPA's CDX and CEDRI online reporting system accessible via cdx.epa.gov, or (2) as an email attachment to the EPA's air permits mailbox (R10_Air_Permits@epa.gov), or (3) as a hardcopy by mail (only if absolutely necessary) 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, listed in order of EPA's preference;
- 60.3. 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
- 60.4. 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)]

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

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

62. 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:

- 62.1. Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;
- 62.2. 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;
- 62.3. The change shall not qualify for the shield under 40 C.F.R. 71.6(f); and

- 62.4. 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) and 50.326(j)(4)]
[40 C.F.R. 71.6(a)(12)]

- 63. Operational Flexibility.** The Permittee may make CAA Section 502(b)(10)¹⁸ 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).

- 63.1. The Permittee shall provide EPA and the Department with a written notification no less than seven days in advance of the proposed change.
- 63.2. For each such change, the notification required by Condition 63.1 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.
- 63.3. The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 63.

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

- 64. Permit Renewal.** To renew this permit, the Permittee shall submit to the Department¹⁹ 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) and 50.326(c) & (j)(2)]
[40 C.F.R. 71.5(a)(1)(iii) and 71.7(b) & (c)(1)(ii)]

¹⁸ 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.

¹⁹ 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

- 65.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are
- 65.1. included and specifically identified in the permit; or
 - 65.2. determined in writing in the permit to be inapplicable.
- [18 AAC 50.326(j)(3) and 50.345(a) & (b)]
- 66.** 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
- 66.1. an enforcement action;
 - 66.2. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or
 - 66.3. denial of an operating permit renewal application.
- [18 AAC 50.040(j), 50.326(j) & 50.345(a) & (c)]
- 67.** 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) and 71.5(c)(8)(iii)(A)]
- 68.** For applicable requirements that will become effective during the permit term, the Permittee shall meet such requirements on a timely basis.
- [18 AAC 50.040(j) and 50.326(j)]
[40 C.F.R. 71.6(c)(3) and 71.5(c)(8)(iii)(B)]
- 69.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.
- [18 AAC 50.326(j)(3) and 50.345(a) & (d)]
- 70.** 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
- 70.1. enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;
 - 70.2. have access to and copy any records required by the permit;
 - 70.3. inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

- 70.4. sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

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

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.

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

- 71.1. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; or
- 71.2. 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)]

72. Table C 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 C 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 C - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
Breakout Tank: EU ID 13 (TK-190)	40 C.F.R. 60 Subpart Ka – Standards of Performance for Storage Vessels for Petroleum Liquids	Commenced construction prior to effective date of subpart (May 18, 1978). The tank has not been modified or reconstructed since the effective date of the standard. The tank is a crude oil breakout tank (not storage vessels as defined in 40 C.F.R. 60) and part of a pipeline system as defined by 49 C.F.R. 195.2.
	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 (July 23, 1984). The tank has not been modified or reconstructed since the effective date of the standard. The tank is a crude oil breakout tank (not storage vessels as defined in 40 C.F.R. 60) and part of a pipeline system as defined by 49 C.F.R. 195.2.
Tanks: 197 & 198 Turbine Fuel Tanks	40 C.F.R. 60 Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids	The tanks were not modified or reconstructed during the applicable time period of Subpart K, 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 Liquids	Commenced construction prior to effective date of subpart (May 18, 1978). The tanks have not been modified or reconstructed since the 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	Commenced construction prior to effective date of subpart (July 23, 1984). The tanks have not been modified or reconstructed since the effective date of the standard.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	Vessels (Including Petroleum Liquid Storage Vessels)	
Engines: EU IDs 10 – 12	40 C.F.R. 60 Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Not affected units (unless modified or reconstructed in the future). These emissions units were manufactured prior to April 1, 2006 applicability date (see 40 C.F.R. 60.4200(a)(2)(i)), and have not been modified or reconstructed after July 11, 2005 (see 40 C.F.R. 60.4200(a)(3)).
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 any subpart of Part 60, 61, or 63.
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. 61, 61, or 63 that specifically references 40 C.F.R. 63 Subpart PP. The stationary source does not include any containers subject to any subpart of Part 60, 61, or 63.
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 any subpart of Part 60, 61, or 63 [40 C.F.R. 63.960].
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. 51 Appendix Y – Guidelines for BART Determinations Under the Regional Haze Rule	PS-9 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).
Stationary Source-Wide	40 C.F.R. 60 Subpart LLL – Standards of Performance for Onshore Natural Gas Processing Plants	Stationary Source does not process natural gas [40 C.F.R. 60.640] and commenced construction prior to effective date of subpart (January 20, 1984). 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 than 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 subparts applicable to the stationary source and no other Part 61 subparts apply to this stationary source.
	40 C.F.R. 61 Subpart J – National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene	No process components in <i>benzene service</i> , 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 <i>volatile hazardous air pollutant (VHAP) service</i> , 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].

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	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).
	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	<p>§61.142 – Standard for Asbestos Mills: APSC PS-9 is not an Asbestos Mill.</p> <p>§61.144 – Standard for Manufacturing: APSC PS-9 does not engage in any manufacturing operations using commercial asbestos.</p> <p>§61.146 – Standard for Spraying: APSC PS-9 does not spray/apply asbestos containing materials.</p> <p>§61.147 – Standard for Fabricating: APSC PS-9 does not engage in any fabricating operations using commercial asbestos.</p> <p>§61.149 – Standard for Waste Disposal for Asbestos Mills: Applies only to those stationary sources subject to 40 C.F.R. 61.142 (Asbestos Mills).</p> <p>§61.151 – Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations: Applies only to those stationary sources subject to 40 C.F.R. 61.142, 61.144, or 61.147 (Asbestos Mills, manufacturing, or fabricating).</p> <p>§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)].</p> <p>§61.154 – Standard for Active Waste Disposal Sites: APSC PS-9 is not an active waste disposal site and does not receive asbestos containing waste material.</p> <p>§61.155 – Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations: APSC PS-9 does not process regulated asbestos containing material (RACM).</p>
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 CCCCC 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	PS-9 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
	Industrial/Commercial/Institutional Boilers and Process Heaters	
	40 C.F.R. 63 Subpart EEEE – NESHAP for Organic Liquid Distribution (non-gasoline)	PS-9 is not a major source of HAPs as defined under any subpart of 40 C.F.R. 63.
	40 C.F.R. 63 Subpart HHHHHH – NESHAP for Paint Stripping and Miscellaneous Surface Coating Operations	Methyl Chloride 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 Methyl Chloride.
	40 C.F.R. 63 Subpart JJJJJJ – NESHAP for Boilers at Area Sources	Stationary source does not contain boilers (as defined in 40 C.F.R. 63.11237).
Stationary Source-Wide	40 C.F.R. 64 – Compliance Assurance Monitoring (CAM)	Stationary source does not contain a pollutant-specific emitting unit that satisfies all of the following criteria: -The emissions unit is subject to an applicable emission limitation or standard; -The unit uses a control device to comply with any such applicability emission limitation or standard; and -The unit has potential pre-control device emissions of the applicable regulated air pollutant equal to or greater than the major source thresholds for the applicable regulated air pollutant.
Stationary Source-Wide	40 C.F.R. 68 – Accidental Release: Risk Management Plan (RMP)	40 C.F.R. Part 68 applies to “stationary sources” [40 C.F.R. 68.10]. “Stationary source” is defined for purposes of Part 68 to exclude facilities engaged in the transportation of hazardous liquids and subject to 49 C.F.R. Parts 192, 193, and 195 [40 C.F.R. 68.3]. TAPS PS-9 transports and stores crude oil subject to the federal Pipeline Safety Act and 49 C.F.R. Part 195. The transportation of crude oil by this pump station and the incidental storage in the pump station breakout tank are not activities that fall within the definition of a stationary source. Therefore, Part 68 does not apply to PS-9. There are no threshold quantities or other 112(r) regulated substances at PS-9. Therefore, Part 68 does not apply to PS-9. The fuel gas line is a 49 C.F.R. Part 192 facility and does not fall within the definition of a “stationary source” [40 C.F.R. 68.2].
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 I 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	Stationary source does not manufacture or distribute Class I and II products or substances.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	Containing or Manufactured with Class II 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(d) – (f)	Stationary source does not operate sources specific to the listed standards.
	18 AAC 50.075	Stationary source does not use wood-fired heating devices.

Section 11. Procedure for Calculating HAP Content of Crude Oil Storage Tank Vapors

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

I. Sample Description/Comments

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

II. Determine Component Mole Fractions in Liquid Crude

Methodology Assumptions/Comments:

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

Liquid Crude Analysis Data		Calculate Component Mole Fraction in Crude			
Component i	Weight Fraction in Crude (wt%/100) Z_{Li}	Molecular Weight (MW) M_i	Moles of Crude (sum $Z_{Li}/M_i \times 1000$) x_T	Mole Fraction in Crude ($Z_{Li}/M_i/x_T$) x_i	Crude MW (sum $M_i \cdot x_i$) 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:

- MW 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 P₁ be known component vapor pressure at known temperature T₁ = 100° F (311° K), and P₂ be unknown component vapor pressure at given crude temperature T₂ (shown below).
3. Pump station crude (and vapor) constant temperature (T₂) 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	Vapor Pressure (VP) at 100°F (psia) P ₁	Heat of Vaporization (Btu/lb-mole) H _v	Heat of Vaporization/ Gas Constant H _v /2.303R	Calculate (T ₂ -T ₁)/T ₂ T ₁	Calculate Inverse Log of (H _v /2.303R)* (T ₂ -T ₁)/T ₂ T ₁	VP 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 C₁ through C₁₀ 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 CO₂ 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) P₂	Component Mole Fraction in Crude (Z_{Li}/M_i/X_T) x_i	Component Partial Pressure at Crude Temperature (P₂*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:

$$M_v = \sum (M_i * y_i)$$

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 MW M_i	Mole Fraction in Vapor (P_i/P_{VA}) y_i	Calculate Vapor Molecular Weight ($\sum M_i * y_i$) 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

**Estimated Actual HAP Emissions – Breakout Tank
 Pump Station 9**

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

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

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

The Total TOC losses from the breakout tank are: _____ lb/yr
 _____ TPY

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

[Permit No. AQ0079CPT03, 10/28/05]
 [18 AAC 50.040(j), 7/25/08; 18 AAC 50.326(j), 12/1/04]
 [40 C.F.R. 71.6(a), 7/2/07]

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

Section 13. Notification Form²⁰

Trans-Alaska Pipeline System (TAPS) Pump Station 9 (PS-9)

AQ0079TVP05

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 COBC²¹, CO²², or Settlement Agreement - Complete Section 2 and Certify

²⁰ Revised as of July 22, 2020.

²¹ Compliance Order By Consent

²² 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.):

- | | |
|--|--|
| <input type="checkbox"/> Start Up/Shut Down | <input type="checkbox"/> Natural Cause (weather/earthquake/flood) |
| <input type="checkbox"/> Control Equipment Failure | <input type="checkbox"/> Scheduled Maintenance/Equipment Adjustments |
| <input type="checkbox"/> Bad fuel/coal/gas | <input type="checkbox"/> Upset Condition |
| <input type="checkbox"/> 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 _____%

Venting _____(gas/scf)

Control Equipment Down

Fugitive Emissions

Emission Limit Exceeded

Marine Vessel Opacity

Flaring

Other: _____

(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 (go to end of form)

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 51.)*

Beginning September 7, 2023, Excess Emissions and Permit Deviations must be submitted through the AOS Permittee Portal at <http://dec.alaska.gov/applications/air/airtoolsweb/>.

This Notification Form may only be used to satisfy the reporting requirements if the Department has approved alternative reporting options in writing prior to submittal.

[18 AAC 50.346(b)(3)]