

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

Permit No. AQ0503TVP04

Issue Date: [Public Comment - November 10, 2025]

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, **Hilcorp Alaska, LLC**, for the operation of the **Northstar Production Facility**.

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 No. AQ0503CPT07 Revision 1 and Minor Permit No. AQ0503MSS04 have been incorporated into this operating permit.

Upon effective date of this permit, Operating Permit No. AQ0503TVP03 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	MMBtu/hr	million British thermal units per hour
ADEC	Alaska Department of Environmental Conservation	MMscf.....	million standard cubic feet
Administrator.....	EPA and the Department.	MR&R.....	monitoring, recordkeeping, and reporting
AOS	Air Online Services	NAICS.....	North American Industrial Classification System
AS	Alaska Statutes	NESHAP	National Emission Standards for Hazardous Air Pollutants [as contained in 40 C.F.R. 61 and 63]
ASTM.....	American Society for Testing and Materials	NH ₃	ammonia
BACT	best available control technology	NO ₂	nitrogen dioxide
CBI	confidential business information	NO _x	nitrogen oxides
CDX.....	Central Data Exchange	NSPS.....	New Source Performance Standards [as contained in 40 C.F.R. 60]
CEDRI	Compliance and Emissions Data Reporting Interface	O ₂	oxygen
C.F.R.	Code of Federal Regulations	Pb	lead
CAA or The Act .	Clean Air Act	PM.....	particulate matter
CO	carbon monoxide	PM ₁₀	particulate matter less than or equal to a nominal 10 microns in diameter
CO ₂ e	CO ₂ -equivalent	PM _{2.5}	particulate matter less than or equal to a nominal 2.5 microns in diameter
CROMERR.....	Cross-Media Electronic Reporting Rule	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
ERT	Electronic Reporting Tool	PTE	potential to emit
EU.....	emissions unit	SIC.	Standard Industrial Classification
EU ID	emissions unit identification	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)	TPY	tons per year
HAPs	hazardous air pollutants [as defined in AS 46.14.990]	VOC	volatile organic compound [as defined in 40 C.F.R. 51.100(s)]
hp.....	horsepower	vol%	volume percent
kPa.....	kiloPascals	wt%	weight percent
LAER.....	lowest achievable emission rate	wt% _{fuel}	weight percent of sulfur in fuel
MACT	maximum achievable control technology [as defined in 40 C.F.R. 63]		

Section 1. Stationary Source Information

Identification

Permittee:	Hilcorp Alaska, LLC 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503	
Stationary Source Name:	Northstar Production Facility	
Location:	70° 29' 39" North; 148° 42' 15" West	
Physical Address:	Seal Island, Six miles offshore north of Point Storkerson in the Beaufort Sea	
Owner and Operator:	Hilcorp Alaska, LLC 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503	
Permittee's Responsible Official:	Luke Saugier, Senior Vice President Trudi Hallet, Asset Team Lead Chris Kanyer, Asset Team Lead Anthony McConkey, Asset Team Lead Jill Fisk, Asset Team Lead 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503	
Designated Agent:	CT Corporation Systems 9360 Glacier Hwy., Suite 202 Juneau, AK 99801	
Stationary Source and Building Contact:	Drew Anderson, Regional Environmental Engineer 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503 (907) 777-8488 ananderson@hilcorp.com	
Fee Contact:	Hilcorp Alaska, LLC / Accounts Payable 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503	
Permit Contact:	Drew Anderson, Regional Environmental Engineer 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503 (907) 777-8488 ananderson@hilcorp.com	
Process Description:	SIC Code	1311 - Crude Petroleum and Natural Gas Production
	NAICS Code:	211120 - Crude Petroleum Extraction

[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	Emissions Unit Name	Emissions Unit Description	Fuel	Rating/Size	Installation or Construction Date
Group A – Stationary Emissions Units					
1	Turbine (Compressor)	GE LM2500	Fuel Gas	32,715 hp	10/24/2001
2	Turbine (Compressor)	GE LM2500	Fuel Gas	32,715 hp	02/08/2002
3	Turbine (Compressor)	Solar Mars 90	Fuel Gas	11,892 kW	10/09/2001
4	Turbine (Compressor)	Solar Mars 90	Fuel Gas	11,892 kW	10/06/2001
5	Turbine (Compressor)	Solar Mars 90	Fuel Gas	11,892 kW	10/01/2001
6	Diesel Generator	Cummins QSK 60-G6	Diesel	2,180 kW	2002
7	Diesel Generator	Cummins QSK 60-G6	Diesel	2,180 kW	2002
8	Firewater Pump	Cummins KTA19	Diesel	755 hp	2000
9c	Incinerator	ACS CA0300	Fuel Gas Waste	2.8 MMBtu/hr 360 lb/hr charge	February 2015
11	High Pressure Flare	Corona (Pilot, Purge, Produced Gas)	Fuel Gas	25.5 MMscf/hr	10/6/2001
12	Low Pressure Flare	Corona (Pilot, Purge, Produced Gas)	Fuel Gas		10/6/2001
13	Glycol Reboiler	Natco	Fuel Gas	5.0 MMBtu/hr	10/7/2001
16	Space Heater, Warehouse	James P. Sheldon Co. Inc.	Fuel Gas	0.70 MMBtu/hr	2001
17	Space Heater, Warehouse	James P. Sheldon Co. Inc.	Fuel Gas	1.075 MMBtu/hr	2001
18	Space Heater, Warehouse	James P. Sheldon Co. Inc.	Fuel Gas	1.082 MMBtu/hr	2001
22	Firewater Pump	Cummins 1760	Diesel	160 hp	07/20/2012
23	TEG Dehydration Unit	Dehydrator	-	600 MMscf/day	2001
24	Produced Water Surge Tank	T-3020	-	1,000 barrels	2001
25	Well Cleanout Tank	T-6140	-	500 barrels	2001
Group B – Portable Equipment					
-	Cranes	Various	Diesel	250 hp	9/22/2007
-	Snow Melters	Various	Diesel	10.0 MMBtu/hr	Various

EU ID	Emissions Unit Name	Emissions Unit Description	Fuel	Rating/Size	Installation or Construction Date
-	Heaters	Various	Diesel	3.0 MMBtu/hr	9/20/2006 & 9/10/2006
Group C – Intermittent Well Servicing Equipment					
-	IC Engines 400-600 hp	Various	Diesel	1,675 hp	Various
-	IC Engines > 600 hp	Various	Diesel	1,475 hp	Various
-	Heaters and Boilers	Various	Diesel	21.5 MMBtu/hr	Various
-	Turbines	Various	Diesel	6,200 hp	Various

Notes:

1. EU IDs 22 and 23 are insignificant on a potential to emit basis, and are included in Table A because they are subject to Title I permit conditions and Title V federal standards.
2. EU IDs 24 and 25 are insignificant on a potential to emit basis, and are included in Table A because they are subject to a Title I permit condition.
3. The Group B Cranes, Group C IC Engines 400-600 hp, and Group C IC Engines > 600 hp are nonroad engines per 40 C.F.R. 1068.30. These emissions units are included in Table A because they are subject to Title I permit conditions.

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

Section 3. State Requirements

Visible Emissions Standard

- 1. Industrial Process and Fuel-Burning Equipment Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU IDs 1 through 8, 11 through 13, 16 through 18, 22, 23, Group B Snow Melters, Group B Heaters, Group C Heaters & Boilers, and Group C Turbines listed in Table A to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

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

- 1.1. For EU IDs 6, 7, and Group C Heaters & Boilers, monitor, record, and report in accordance with Conditions 3 through 5.

- a. For EU IDs 6 and 7, no less than one surveillance shall be conducted per 400 unit-hours of operation (emergency and non-emergency hours combined) for each emissions unit.

[Condition 5.2a, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]

- 1.2. For each of EU IDs 8, Group B Snow Melters, Group B Heaters, and Group C Turbines, as long as the emissions unit does not exceed the limits in Table C, monitoring shall consist of an annual compliance certification under Condition 99 for the visible emissions standard based on reasonable inquiry. Otherwise, comply with Condition 1.3.

- a. For EU ID 8, no less than one surveillance per 1,000 unit-hours of operation shall be conducted.

[Condition 5.2b, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]

- 1.3. For each of EU IDs 8, Group B Snow Melters, Group B Heaters, and Group C Turbines, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e) during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 99 for the visible emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 98 if any of EU IDs 8, Group B Snow Melters, Group B Heaters, and Group C Turbines reaches any of the significant emissions thresholds listed in 18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 3 through 5 for the remainder of the permit term for that emissions unit.

- 1.4. For EU IDs 22 and 23, monitoring shall consist of an annual compliance certification under Condition 99 for the visible emissions standard based on reasonable inquiry.

1.5. For EU IDs 1 through 5, 13, and 16 through 18, burn only gas as fuel. In each operating report under Condition 98 indicate whether each of these emissions units burned only gas during the period covered by the report. Report under Condition 97 if any fuel other than gas is burned in any of these emissions units.

1.6. For EU IDs 11 and 12, monitor, record and report in accordance with Condition 6.

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

2. Incinerator Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, through the exhaust effluent of the incinerator, EU ID 9c, to reduce visibility by more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.040(j)(4) & 50.050(a)]
[40 C.F.R. 71.6(a)(1)]

2.1. No less than once during each calendar year the incinerator operates and upon the Department's request, observe the exhaust of EU ID 9c for visible emissions for 18 consecutive minutes to obtain a minimum of 72 observations in accordance with Method 9 of 40 C.F.R. 60, Appendix A.

[Condition 4.1, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]

2.2. Record and report in accordance with Conditions 4 and 5.

2.3. If any monitoring under Condition 2.1 was not performed, report under Condition 97 within three days of the date the monitoring was required.

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

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

Liquid Fuel-Burning Equipment

3. Visible Emissions Monitoring. When required by any of Conditions 1.1 through 1.3, or in the event of replacement¹ during the permit term, the Permittee shall observe the exhaust of EU IDs 6 through 8, Group B Snow Melters, Group B Heaters, Group C Heaters & Boilers, and Group C Turbines for visible emissions using either the Method 9 Plan under Condition 3.2.

3.1. The Permittee may, for each unit, elect to continue the visible emissions monitoring schedule specified in Conditions 3.2.b through 3.2.e that remains in effect from a previous permit.

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

¹ "Replacement," as defined in 40 C.F.R. 51.166(b)(32).

² Visible emissions observations are not required during emergency operations.

- a. First Method 9 Observation. Except as provided in Condition 3.1, observe the exhausts of EU IDs 6 through 8, Group B Snow Melters, Group B Heaters, Group C Heaters & Boilers, and Group C Turbines according to the following criteria:
- (i) Except as provided in Condition 3.2.a(ii), for any of EU IDs 6, 7, and Group C Heaters & Boilers, observe exhaust within six months after the effective date of this permit.
 - (ii) For any unit replaced, observe exhaust within 60 days of the newly installed emissions unit becoming fully operational.³ Except as provided in Condition 3.2.e, after the First Method 9 observation:
 - (A) For EU IDs 6, 7, and Group C Heaters & Boilers, continue with the monitoring schedule of the replaced emissions unit; and
 - (B) For EU IDs 8, Group B Snow Melters, Group B Heaters, and Group C Turbines comply with Conditions 1.2 and/or 1.3, as applicable.
 - (iii) For each of EU IDs 8, Group B Snow Melters, Group B Heaters, and Group C Turbines, observe the exhaust of the emissions unit within 30 days after the end of the calendar month during which monitoring was triggered under Condition 1.3; 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 3.2.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 3.2.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 3.2.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

³ “Fully operational” means upon completion of all functionality checks and commissioning after unit installation. “Installation” is complete when the unit is ready for functionality checks to begin.

- (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 3.2.b, and continue monitoring in accordance with the Method 9 Plan.

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

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

4.1. 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 11;
 - (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 11; 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.
- 4.2. The records required by Condition 4.1 may be kept in electronic format.
[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(ii)]

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

- 5.1. In the first operating report required in Condition 98 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.
- 5.2. Include in each operating report required under Condition 98 for the period covered by the report:
 - a. for all Method 9 Plan observations:
 - (i) copies of the observation results (i.e., opacity observations) for each emissions unit, except for the observations the Permittee has already supplied to the Department; and
 - (ii) a summary to include:
 - (A) number of days observations were made;
 - (B) highest six-consecutive- and 18-consecutive-minute average opacities observed; and
 - (C) dates when one or more observed six-consecutive-minute average opacities were greater than 20 percent;
 - b. a summary of any monitoring or recordkeeping required under Conditions 3 and 4 that was not done.
- 5.3. Report under Condition 97:
 - 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 3 was not performed when required, report within three days of the date that the monitoring was required.

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

Flares

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

- 6.1. Observe flare events⁴ on EU IDs 11 and 12, for visible emissions following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations according to the following schedule:
 - a. Conduct subsequent visible emissions observations within 14 months of, but not earlier than three months after, the preceding flare event visible emissions observation.
 - b. If there are no flare events that meet the requirements of Condition 6.1.a, the Permittee shall observe the next daylight flare event.
- 6.2. Record the following information for observed flare event:
 - a. the flare EU ID number;
 - b. results of the Method 9 observations;
 - c. reason for flaring;
 - d. date, beginning and ending time of event; and
 - e. volume of gas flared.
- 6.3. The records required by Condition 6.2 may be kept in electronic format.
- 6.4. Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available.
- 6.5. Include the following in the operating report required by Condition 98 for the period covered by the report:
 - a. copies of the records required by Condition 6.2; and
 - b. if an annual flare event observation required by Condition 6.1.a has not been fulfilled for the year and/or monitoring of a flare event is postponed, an explanation of the reason the event was not monitored.
- 6.6. Report under Condition 97 :
 - a. whenever the visible emissions standard in Condition 1 is exceeded; or
 - b. the monitoring required under Condition 6.1 is not completed, except as allowed under Condition 6.4.

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

- 6.7. If no flare events are monitored during a certification period, the Permittee shall certify compliance under Condition 99 with the visible emissions standard in Condition 1 based on reasonable inquiry.

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

Particulate Matter (PM) Emissions Standard

7. **Industrial Process and Fuel-Burning Equipment PM Emissions.** The Permittee shall not cause or allow particulate matter emitted from EU IDs 1 through 8, 11 through 13, 16 through 18, 22, 23, Group B Snow Melters, Group B Heaters, Group C Heaters & Boilers, and Group C Turbines 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)]

- 7.1. For EU IDs 6 and 7, monitor, record and report in accordance with Conditions 8 through 10.
- 7.2. For Group C Heaters & Boilers, monitor, record and report in accordance with Conditions 11 through 13.
- 7.3. For each of EU IDs 8, Group B Snow Melters, Group B Heaters, and Group C Turbines, as long as the emissions unit does not exceed the limits in Table C, monitoring shall consist of an annual compliance certification under Condition 99 for the PM emissions standard based on reasonable inquiry. Otherwise, comply with Condition 7.4.
- 7.4. For each of EU IDs 8, Group B Snow Melters, Group B Heaters, and Group C Turbines, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e) during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 99 for the PM emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 98 if any of EU IDs 8, Group B Snow Melters, Group B Heaters, and Group C Turbines reaches any of the significant emissions thresholds and monitor, record and report in accordance with Conditions 8 through 10 and/or Conditions 11 through 13 for the remainder of the permit term for that emissions unit.
- 7.5. For EU IDs 22 and 23, the Permittee must annually certify compliance under Condition 99 for the PM emissions standard based on reasonable inquiry.
- 7.6. For EU IDs 1 through 5, 13, and 16 through 18, the Permittee shall comply with Condition 1.5.
- 7.7. For EU IDs 11 and 12, the Permittee shall comply with Condition 6.

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

PM MR&R

Liquid Fuel-Burning Engines and Turbines

- 8. PM Monitoring.** The Permittee shall conduct source tests on EU IDs 6 and 7 and EU IDs 8 and Group C Turbines (when required by Condition 7.4), 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)]

- 8.1. If the result of any Method 9 observation conducted under Condition 3.2 for any of EU IDs 6 and 7 and EU IDs 8 and Group C Turbines is greater than the criteria of Condition 8.2.a or Condition 8.2.b, the Permittee shall, within six months of that Method 9 observation, either:
- 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 8.2; or
 - except as exempted in Condition 8.4, conduct a PM source test according to requirements set out in Section 6.
- 8.2. Take corrective action or conduct a PM source test, in accordance with Condition 8.1, if any Method 9 observation under Condition 3.2 results in an 18-minute average opacity greater than
- 20 percent for an emissions unit with an exhaust stack diameter that is equal to or greater than 18 inches; or
 - 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.
- 8.3. During each one-hour PM source test run under Condition 8.1.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.
- 8.4. The PM source test requirements in Condition 8.1.b are waived for an emissions unit if:
- a PM source test on that unit has shown compliance with the PM standard during this permit term; or
 - corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 3.2) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 8.2.

- 9. PM Recordkeeping.** The Permittee shall comply with the following:

- 9.1. Keep records of the results of any source test and visible emissions observations conducted under Condition 8.

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

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

- 10.1. Notify the Department of any Method 9 observation results that are greater than the threshold of either Conditions 8.2.a or 8.2.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 8.2.

- 10.2. In each operating report under Condition 98, include:

- a. a summary of the results of any PM source test and visible emissions observations conducted under Condition 8; and
- b. copies of any visible emissions observation results greater than the thresholds of Condition 8.2, if they were not already submitted.

- 10.3. Report in accordance with Condition 97:

- a. anytime the results of a PM source test exceed the PM emissions standard in Condition 7; or
- b. if the requirements under Condition 8.1 were triggered and the Permittee did not comply on time with either Condition 8.1.a or 8.1.b. Report the deviation within 24 hours of the date compliance with Condition 8.1 was required.

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

Liquid Fuel-Burning Boilers and Heaters

11. PM Monitoring. The Permittee shall conduct source tests on Group C Heaters & Boilers as well as Group B Snow Melters and Group B Heaters (when required by Condition 7.4) to determine the concentration of PM in the exhaust of each emissions unit as follows:

- 11.1. If the result of any Method 9 observation conducted under Condition 3.2 for any of Group C Heaters & Boilers and Group B Snow Melters and Group B Heaters results in an 18-minute average opacity greater than 20 percent opacity, the Permittee shall, within six months of that Method 9 observation, either:

- a. take corrective action and observe the emissions unit exhaust under load conditions comparable to those when the criteria were exceeded, following 40 C.F.R. 60, Appendix A-4 Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations, to show that emissions are no longer greater than an 18-minute average opacity of 20 percent; or
- b. except as exempted under Condition 11.3, conduct a PM source test according to the requirements in Section 6.

- 11.2. During each one-hour PM source test run under Condition 11.1, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive-minute average opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.
- 11.3. The PM source test requirement in Condition 11.1 is waived for an emissions unit if:
 - a. a source test on that unit has shown compliance with the PM standard during the permit term; or
 - b. corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 3.2) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 11.1.

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

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

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

13. **PM Reporting.** The Permittee shall report as follows:

- 13.1. Notify the Department of any Method 9 observation results that are greater than the threshold of Condition 11.1 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 the threshold in Condition 11.1.
- 13.2. In each operating report required by Condition 98, include:
 - a. a summary of the results of any source test and visible emissions observations conducted under Condition 11; and
 - b. copies of any visible emissions observation results greater than the threshold in Condition 11.1, if they were not already submitted.
- 13.3. Report in accordance with Condition 97 any time the results of a source test exceed the PM emission standard in Condition 7.

[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

14. **Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from EU IDs 1 through 8, 11 through 13, 16 through 18, 22, 23, Group B Snow Melters, Group B Heaters, Group C Heaters & Boilers, and Group C Turbines listed in Table A 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 Emissions MR&R

Fuel Oil⁵ (EU IDs 6 through 8, 22, Group B Snow Melters, Group B Heaters, Group C Heaters & Boilers, and Group C Turbines)

15. Sulfur Compound Emissions Monitoring and Recordkeeping. The Permittee shall monitor and keep records, as follows:

15.1. Comply with either Condition 15.1.a or Condition 15.1.b:

a. For each shipment of fuel:

(i) If the fuel grade requires a sulfur content 0.5 percent by weight ($\text{wt}\%S_{\text{fuel}}$) or less, keep receipts that specify fuel grade and amount; or

(ii) If the fuel grade does not require a sulfur content 0.5 $\text{wt}\%S_{\text{fuel}}$ or less, keep receipts that specify fuel grade and amount, and

(A) test the fuel for sulfur content; or

(B) 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; or

b. Test the sulfur content of the fuel in each storage tank that supplies fuel to EU IDs 6 through 8, Group B Snow Melters, Group B Heaters, Group C Heaters & Boilers, and Group C Turbines at least monthly.

15.2. Fuel testing under Condition 15.1.a or Condition 15.1.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).

15.3. If a shipment of fuel contains greater than 0.75 $\text{wt}\%S_{\text{fuel}}$ or if the results of a fuel sulfur content test indicate that the fuel contains greater than 0.75 $\text{wt}\%S_{\text{fuel}}$, the Permittee shall calculate SO_2 emissions in parts per million (ppm) using either the SO_2 material balance calculation in Section 12 or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a)(3).

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

16. Sulfur Compound Emissions Reporting. The Permittee shall report as follows:

16.1. If SO_2 emissions calculated under Condition 15.3 exceed 500 ppm, the Permittee shall report in accordance with Condition 97. When reporting under this condition, include the calculation under Condition 15.3.

16.2. The Permittee shall include in the operating report required by Condition 98 for each month covered by the report:

⁵ *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.

- a. a list of the fuel grades received at the stationary source;
- b. for any fuel received with a fuel sulfur content greater than 0.5 wt% S_{fuel} , the fuel sulfur content of the shipment;
- c. the results of all fuel sulfur analyses conducted under Condition 15.1.a or Condition 15.1.b and documentation of the method(s) used to complete the analyses; and
- d. for any fuel received with a sulfur content greater than 0.75 wt% S_{fuel} , the calculated SO₂ emissions in ppm calculated under Condition 15.3.

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

Fuel Gas (EU IDs 1 – 5, 11 – 13, and 16 - 18)

17. Sulfur Compound Monitoring. The Permittee shall either:

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

18. Sulfur Compound Recordkeeping. The Permittee shall keep records of the semiannual statement from the fuel supplier or the sulfur content analysis required under Conditions 17.1 or 17.2.

19. Sulfur Compound Reporting. The Permittee shall report as follows:

- 19.1. Report as excess emissions, in accordance with Condition 97, whenever the fuel combusted causes sulfur compound emissions to exceed the standard of Condition 14.
- 19.2. Include copies of the records required by Condition 18 with the operating report required by Condition 98 for the period covered by the report.

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

Preconstruction Permit ⁶ Requirements

Ambient Air Quality Protection Requirements

⁶ *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.

20. Notification. The Permittee shall provide unique identification and labels on each emission unit (EU) listed in Table A and at the stationary source. Maintain additional information on EU category, subcategory, and EU identification number as applicable, in on-site logs available to the Department's compliance officers for:

[Condition 8, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii)]

- 20.1. Stationary EUs, Table A, Group A;
- 20.2. Portable Equipment, Table A, Group B; and
- 20.3. Intermittent Well Servicing Equipment, Table A, Group C:
 - a. IC Engines between 400 to 600 hp and
 - b. IC Engines larger than 600 hp.
- 20.4. Keep records of all on-site equipment. Maintain equipment inventories for EUs listed in Table A, Group A (Stationary EUs).

[Condition 8.4, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]

21. Used Oil. Do not burn used oil at the stationary source.

[Condition 9, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

22. General Ambient Air Quality Provisions. Comply with the following provisions to protect the nitrogen dioxide (NO₂), SO₂, PM with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM₁₀), and carbon monoxide (CO) air quality standards:

[Condition 10, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

22.1. Stack Configuration:

- a. Construct and maintain vertical, uncapped exhaust stacks for: all permanent EUs; all portable EUs rated at or above 40 hp; all intermittent engines rated at or above 400 hp; and all intermittent heaters/boilers with a heat input rating of 2.8 MMBtu/hr or more. This condition does not preclude the use of flapper valve rain covers, or other similar designs, that do not hinder the vertical momentum of the exhaust plume.
- b. Maintain the minimum exhaust stack heights listed in Table B.

Table B – Minimum Stack Height Requirements

EU ID	Emissions Unit Description	Minimum Stack Height Above Grade (m)
1	GE LM2500 Turbine	35.1
2	GE LM2500 Turbine	35.1

3	Solar Mars Turbine	35.1
4	Solar Mars Turbine	35.1
5	Solar Mars Turbine	35.1
6	Diesel Generator	35.0
7	Diesel Generator	35.0
8	Firewater Pump	17.3
9c	Incinerator	19.8
13	Glycol Reboiler	35.1
16	Space Heater	10.0
17	Space Heater	10.0
18	Space Heater	10.0
22	Firewater Pump	17.3

[Condition 10.1, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

23. Fuel Sulfur Limits.

[Condition 11, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]
[18 AAC 50.040(j) & 50.326(j)]

23.1. Limit the H₂S content of the fuel gas burned in any EU to no more than 300 parts per million by volume (ppmv) at any time.

- a. Monitor, record, and report in accordance with Conditions 17, 18, and 19.2.
- b. Report in accordance with Condition 97 if the limit in Condition 23.1.a is exceeded.

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

23.2. Burn only ultra low sulfur diesel (ULSD) fuel in Group C EUs, all intermittently used oil field service equipment such as internal combustion engines, boilers/heaters rated at less than 400 hp or 2.8 MMBtu/hr, and all other non-road diesel fired engines.

- a. Maintain dedicated fuel tanks for the EUs described in Condition 23.2.
- b. Attach vendor receipts to the operating report required in Condition 98 that confirm that the diesel fuel delivered to the fuel tanks in Condition 23.2.a is ultra low sulfur diesel fuel.
- c. Report in accordance with Condition 97 whenever fuel other than ULSD is burned in any emissions unit in Condition 23.2.

23.3. Burn diesel fuel containing no more than 0.1 percent of sulfur by weight in diesel-fired Group A and Group B EUs.

- a. Monitor, record, and report in accordance with Conditions 15.1, 15.2, and 16.2.a.

- b. Report in accordance with Condition 97 if the limit in Condition 23.3 is exceeded.

24. Operating Limits for Ambient Air Protection. Comply with the operating limits specified in Table C for each EU.

[Condition 12, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]
 [18 AAC 50.040(j) & 50.326(j)]
 [40 C.F.R. 71.6(a)(1)]

Table C – EU Specific Hourly, Daily, and Annual Limits

EU ID	Description/Operation	Maximum Aggregate Capacity/Limit	Daily Limits	12-months Rolling Limits
Group A – Stationary Emission Units				
1, 2	GE LM2500 Turbines	unrestricted ¹	unrestricted	234 tons NO _x (combined)
3, 4, 5	Solar Mars Turbines	unrestricted ¹	unrestricted	249 tons NO _x (combined)
6, 7	Diesel Generators	unrestricted ¹	unrestricted	1,000 hours (combined)
8	Firewater Pump	unrestricted ¹	unrestricted	104 hours ²
11, 12	HP and LP Flare	25.5 MMscf/hr	200.5 MMscf	1,332 MMscf
22	Firewater Pump	unrestricted ¹	unrestricted	1,000 hours
Group B – Portable Equipment				
-	Heaters	3 MMBtu/hr	unrestricted	162,038 gal
-	Snow Melters	10 MMBtu/hr	unrestricted	164,422 gal
-	Cranes	250 hp	unrestricted	unrestricted
Group C – Intermittent Well Servicing Equipment				
-	IC Engines 400 to 600 hp	1,675 hp	unrestricted	106,032 gal
-	IC Engines > 600 hp	1,475 hp	unrestricted	56,713 gal
-	Heaters and Boilers	21.5 MMBtu/hr	unrestricted	479,719 gal
-	Turbines	6,200 hp	3,262 gal	16,311 gal

Table Notes:

¹ Table 2 of Construction Permit AQ0503CPT07 indicates the rating of this unit is “Not Available”. The rating shown above is listed as “unrestricted” to denote that there is not a limit on the rating.

² Limit applies to non-emergency use.

25. Monitoring and Recording for Compliance with Condition 24.

[Condition 13, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]
 [18 AAC 50.040(j) & 50.326(j)]
 [40 C.F.R. 71.6(a)(3)(i) & (ii)]

- 25.1. Monitor and record the hours of operation each calendar month for EU IDs 1 through 8 and 22. Record monthly the cumulative 12-month rolling hours of operation for each month by the end of the following month.

- 25.2. For each equipment pool subject to a cumulative rated capacity limit (hp or MMBtu/hr), record the date, time, rated capacity, and duration each EU is in service, and the cumulative total capacity used for the equipment pool for operations each day the limit applied. In lieu of monitoring and recording the time, duration, and total capacity, the Permittee may assume continuous operation for either each day or 12-hour shift the EU operates and the nameplate equipment load or vendor specified maximum load. Alternatively, for Portable Equipment listed in Group B, and for Intermittent Well Servicing Equipment in Group C, if diesel fuel burned on the island during a day is less than 1,158 gallons, then list only the total fuel burned on the island for the day.
 - 25.3. For each EU or equipment pool subject to annual diesel fuel use limits, measure and record the total volume of diesel fuel delivered to the EU or equipment pool each calendar month. For the Group C Turbines subject to daily fuel use limits, measure and record the volume of diesel fuel used each day. Fuel use may be estimated by using the maximum fuel rating for the unit and the hours of operation.
 - a. Flow meters and totalizers, if used, must be calibrated and certified to within ± 5 percent.
 - b. Provide a statement of calibration or certification in the operating report required in Condition 98 and note the date of last calibration or certification.
 - 25.4. For EU IDs 11 and 12 (High Pressure Flare and Low Pressure Flare), measure and record the combined hourly, daily and monthly flaring rates, and the 12-month rolling flaring for each month by the end of the following month. Include pilot, purge, and produced gases in the flaring rate measurements.
 - 25.5. For EU IDs 1 through 5 (Solar Mars Turbines and GE LM2500 Turbines), calculate and record the daily NO_x emissions based on hours of operation and emission factors for specific temperature and load ranges listed in Section 14. Calculate and record the total NO_x emissions for EU IDs 1 and 2 (GE LM2500 Turbines) and EU IDs 3, 4, and 5 (Solar Mars Turbines) for each month and 12-month rolling period by the end of the following month by summing the NO_x emission for each day the EUs operate during the time period.
 - a. Use the updated emission factors from source testing conducted under Condition 27.3.b to calculate emissions as required in Condition 25.5. Only emission factors from Department approved source test results shall be used.
- 26. Reporting for Compliance with Condition 24.** Report in the operating report required in Condition 98:

[Condition 14, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)]

- 26.1. For each of the EUs in Conditions 26.1.a through 26.1.c that are subject to a cumulative rated capacity/limit (e.g., MMscf, hp, or MMBtu), list the limit and the highest hourly recordings for each month of the reporting period. For each month the limit is exceeded, list the recording for every instance the limit is exceeded:
- a. EU IDs 11 and 12 (High Pressure Flare and Low Pressure Flare) listed in Group A;
 - b. Cranes, Heaters, and Snow Melters listed in Group B, the inventory of the portable EUs including capacity; and
 - c. IC Engines of capacity 400-600 hp and larger than 600 hp, Heaters & Boilers, and Turbines listed in Group C, the inventory of the portable EUs including capacity.
- 26.2. For each of the following EUs subject to a daily operation limit (e.g., hours, MMscf, or gallons), list the limit and the highest daily recordings for each month of the reporting period. For each month the limit is exceeded, list the recording for every instance the limit is exceeded for:
- a. The MMscf of fuel gas burned in EU IDs 11 and 12;
 - b. The diesel fuel burned in the Group C Turbines; and
 - c. Alternatively, if the diesel fuel burned on the island during a day is less than 1,158 gallons, then report only the total fuel burned on the island for the day.
- 26.3. For each of the following EUs subject to a 12-month rolling total operation limit (e.g., hours, cubic feet, gallons, or MMscf), list the limit, the monthly, and 12-month rolling total for each month of the reporting period:
- a. EU IDs 6, 7, 8, 11, 12, and 22 listed in Group A;
 - b. Heaters and Snow Melters listed in Group B;
 - c. IC Engines of capacity 400-600 hp and larger than 600 hp, Heaters & Boilers, and Turbines listed in Group C; and
 - d. Alternatively, for Portable Equipment listed in Group B, and for Intermittent Well Servicing Equipment in Group C, if diesel fuel burned on the island each day is less than 1,158 gallons, report only the total fuel burned on the island for the month and 12-month rolling total.
- 26.4. For each of the following equipment pools subject to a tons per year limit of NO_x, list the limit, and 12-month rolling total for each month of the reporting period:
- a. EU IDs 1 and 2 (GE LM250 Turbines) listed in Group A; and
 - b. EU IDs 3, 4, and 5 (Solar Mars Turbines) listed in Group A.

Best Available Control Technology (BACT)

27. Nitrogen Oxides (NO_x) BACT.

[Condition 16, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]
[18 AAC 50.040(j) & 50.326(j)]

- 27.1. Install and operate as BACT for the following fuel burning equipment at Northstar.
- a. EU IDs 6 and 7 (Generators) with variable fuel injection timing retard as incorporated by the manufacturer;
 - b. EU IDs 1 and 2 (GE LM2500 Turbines) with dry low NO_x combustion technology; and
 - c. EU IDs 3, 4, and 5 (Solar Mars Turbines) with SoLoNO_x dry low NO_x combustion technology.
- 27.2. Comply with the following not-to-exceed NO_x emission limits.
- a. For EU IDs 1 and 2:
 - (i) 25 ppmv corrected to 15 percent oxygen (O₂) and 24.3 pounds per hour (lb/hr) per unit, expressed as nitrogen dioxide (NO₂), at 0°F or greater, and
 - (ii) 43 lb/hr per unit, expressed as NO₂, at less than 0°F.
 - b. For EU IDs 3, 4, and 5:
 - (i) 42 ppmv corrected to 15 percent O₂ and 21.7 lb/hr per unit, expressed as NO₂, in low emissions operations and at 0°F or greater; and
 - (ii) 83.4 lb/hr per unit, expressed as NO₂, at less than 0°F or when not operating in low emissions operation.
 - c. For EU IDs 6 and 7, NO_x emissions shall not exceed 13 grams per kilowatt-hour (g/kWh);
- 27.3. Monitor compliance as follows:
- a. For EU IDs 3, 4, and 5, monitor emissions mode (low, intermediate, or full) using continuous tracking of gas producer speed through the control panel. Record the date, time, and duration for which each of the EU IDs 3, 4, and 5 is in each mode.
 - b. **NO_x Recurring Testing.** The Permittee shall conduct NO_x source tests in accordance with NSPS Subpart GG. Use Method 19 to convert NO_x emission concentrations to emission rates. Perform the source test in accordance with Section 6 and as follows:
 - (i) Conduct NO_x source tests on a representative emission unit (one of EU IDs 1 or 2 and one of EU IDs 3, 4, or 5) following the schedule and procedures in Condition 45.1 during summer months (April through September) and during winter months (October through March).

- 27.4. Report in accordance with Condition 97 any time a source test result (the average of the three 1-hour runs) exceeds a limit in Condition 27.2.a, 27.2.b, or 27.2.c.

28. Carbon Monoxide (CO) BACT.

[Condition 17, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]
[18 AAC 50.040(j) & 50.326(j)]

- 28.1. Install and operate as BACT for the following fuel burning equipment:

- a. EU ID 9c (Incinerator) with secondary combustion chamber; and
- b. EU ID 11 (High Pressure Flare) and EU ID 12 (Low Pressure Flare) with air-assist or sonic design and smokeless flare technology.

- 28.2. Comply with the following not-to-exceed CO emission limits:

- a. For EU IDs 1 and 2:
 - (i) 25 ppmv corrected to 15% O₂ and 14.8 lb/hr per unit at 0°F or greater;
 - (ii) 38 lb/hr per unit at less than 0°F; and
 - (iii) A cumulative total of 143 tons per 12-month rolling period.
- b. For EU IDs 3, 4, and 5:
 - (i) 50 ppmv corrected to 15% O₂ and 15.7 lb/hr per unit in low emissions operation and at 0°F or greater;
 - (ii) 37.1 lb/hr per unit in low emissions operation and at less than 0°F;
 - (iii) 367 lb/hr per unit when not operating in low emissions operation; and
 - (iv) A cumulative total of 3,000 hours when not operating in low emissions operation per 12-month rolling period.
- c. For EU IDs 6 and 7 (Generators), no greater than 13.2 lb/hr per unit.
- d. For EU ID 8 (Fire Water Pump), no greater than 6.4 lb/hr.
- e. For EU IDs 11 and 12 (High Pressure and Low Pressure Flares), no greater than 0.37 lb/MMBtu.

- 28.3. Monitor compliance as follows:

- a. For EU IDs 3, 4, and 5, calculate and record daily average CO emission rates from the turbines based on hours of operation and emission factors for specific temperature and load ranges as set out in Section 14. Calculate and record the total CO emission rates for EU IDs 3, 4, and 5 for each month and 12-month rolling period, by the end of the following month, by summing the CO rates for each day. If the cumulative total CO emission rate exceeds 504 tons per 12-month rolling period, reassess CO BACT for EU IDs 3, 4, and 5 and submit to the Department within 90 days of discovery.

- b. For EU IDs 1 and 2, calculate and record daily average CO emission rates from the turbines based on hours of operation and emission factors for specific temperature and load ranges as set out in Section 14. Calculate and record the total CO emission rates for EU IDs 1 and 2 for each month and 12-month rolling period, by the end of the following month, by summing the CO rates for each day the EUs operate during the time period to ascertain compliance with the limit listed in Condition 28.2.a(iii).
 - c. For EU IDs 11 and 12, operate the equipment according to specific design parameters provided by the manufacturer. Keep a copy of the manufacturer's design parameters on site and make them available to Department personnel on request.
 - d. **CO Recurring Testing.** The Permittee shall conduct CO source tests in accordance with Methods 10 and 3A, respectively. Use Method 19 to convert CO emission concentrations to emission rates. Perform the source test in accordance with Section 6 and as follows:
 - (i) Conduct a CO source test on a representative emission unit (one of EU IDs 1 or 2 and one of EU IDs 3, 4, or 5) each time a test is conducted under Condition 27.3.b(i).
 - e. Use the updated CO emissions factors from CO source testing conducted under Condition 28.3.d to calculate CO TPY emissions as required in Conditions 28.3.a and 28.3.b. Only emission factors from Department approved source test results shall be used.
- 28.4. Report in accordance with Condition 97 any time a source test results (the average of the three 1-hour runs) exceeds a limit in Condition 28.2.a(i), 28.2.a(ii), 28.2.b(i), 28.2.b(ii), 28.2.b(iii), 28.2.c, or 28.2.d.
- 28.5. If CO emissions from EU IDs 3, 4, and 5 exceed a cumulative total of 504 tons per 12-month rolling period, submit a current BACT reassessment for EU IDs 3, 4, and 5 within 90 days of discovery.
- 28.6. Report in the operating report required in Condition 98:
- a. For EU IDs 3, 4, and 5, the cumulative 12-month rolling total hours of operation in each emissions mode; and
 - b. The cumulative monthly and 12-month rolling total CO emissions from EU IDs 1 and 2 and EU IDs 3, 4, and 5.

29. Sulfur Dioxide (SO₂) BACT.

[Condition 18, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]
[18 AAC 50.040(j) & 50.326(j)]

- 29.1. Comply with the following fuel sulfur limits as BACT:
- a. H₂S content of fuel gas burned shall not exceed 300 ppmv for fuel gas-fired emissions units in Table A; and

- b. Monitor, record, and report in accordance with Conditions 17, 18, and 19.2.
- 29.2. Comply with the following sulfur content of the diesel fuel as BACT:
- a. Sulfur content of the diesel fuel shall not exceed 0.1 percent by weight for diesel-fired emissions units in Group A of Table A, excluding EU ID 22; and
 - b. Monitor, record, and report in accordance with Conditions 15.1, 15.2, and 16.2.a.

30. Volatile Organic Compounds (VOC) BACT.

[Condition 19, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]
[18 AAC 50.040(j) & 50.326(j)]

- 30.1. Install and operate as BACT:
- a. EU ID 9c (Incinerator) with secondary combustion chamber;
 - b. EU IDs 11 and 12 (High Pressure and Low Pressure Flares) with air-assist or sonic design and smokeless technology;
 - c. EU IDs 24 and 25 (Water Injection Tanks and Slop Oil Tank) with a sealed system design vented to the flaring system; and
 - d. Portable Fuel Oil Storage Tanks with conservation vents.
- 30.2. Operate and maintain each pump, pressure relief device, open-ended valve or line, valve compressor and flange, or other connector in VOC or wet gas service, and each natural gas processing device or system in accordance with good operational practices. Tag and repair all leaking connectors, pumps, and compressors in VOC, or wet gas service as soon as practicable. Maintain a log of preventative maintenance, surveillance activities, and repairs.

31. PM with Aerodynamic Diameter not Exceeding 10 Microns (PM₁₀) BACT.

[Condition 20, Construction Permit AQ0503CPT07 Revision 1, 11/18/2014]
[18 AAC 50.040(j) & 50.326(j)]

- 31.1. Install and operate as BACT:
- a. Fuel burning EUs in Group A of Table A, excluding EU ID 22, with good operating practices;
 - b. EU ID 9c (Incinerator) with secondary combustion chamber;
 - c. EU IDs 11 and 12 (High Pressure and Low Pressure Flares) with air-assist or sonic design and smokeless flare technology.
- 31.2. Comply with the following surrogate PM₁₀ emission limits as representative of BACT. Visible emissions from:
- a. EU IDs 1 through 5 (Turbines) shall not exceed 10 percent opacity for greater than three minutes in any one hour; and

- b. All industrial processes, incinerators, and fuel-burning equipment in Group A of Table A, excluding EU ID 22, shall comply with the applicable state visible emissions and PM standards listed in Conditions 1, 2, and 7.
- 31.3. For EU IDs 1 through 5, monitor and report in accordance with Condition 1.5 and as follows
- a. For EU IDs 1 through 5, record all observations of visible emissions (excluding condensed water vapor).
 - b. If continuous visible emissions (excluding condensed water vapor) are observed for longer than three minutes, initiate corrective action within 24 hours to eliminate visible emissions.
 - (i) Keep a written record of the starting date, the completion date, and a description of the actions taken to eliminate the visible emissions;
 - (ii) Observe the emissions unit at least once each day for the next seven operating days to ensure that the corrective action has been successful in eliminating visible emissions. After seven operating days, if the corrective actions taken do not eliminate the visible emissions, then observe the emission unit using EPA Method 9 in 40 C.F.R. 60, Appendix A-4 within 24 hours. Conduct this observation for 18 minutes to obtain 72 consecutive 15-second opacity observations. As necessary, take additional corrective actions to eliminate visible emissions and repeat the monitoring, recordkeeping, and reporting steps of Condition 31.3.b until visible emissions are eliminated.
 - c. Record and report as required under Conditions 4.1, 5.2, and 5.3.a except report results compared to the 10 percent opacity limit instead of 20 percent opacity.
 - d. Provide a copy of the records required under Condition 31.3.b(i) in the operating report required in Condition 98.

ORLs to Avoid PSD Modification for VOCs and HAP Major Source Classification

- 32.** The Permittee shall limit the total combined emissions of HAPs from EU IDs 11, 12, 13, and 23 to less than 12 tons and the total combined VOC emissions increase from EU IDs 11, 12, 13, and 23 to less than 39 tons in any 12 consecutive months. The Permittee shall ensure compliance with the limit in Condition 32 as follows:

[Condition 4, Minor Permit AQ0503MSS04, 6/3/2019]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)]

- 32.1. Route all gas from the reboiler and the flash tank of the dehydrator (EU ID 23) to the low pressure flare (EU ID 12) at all times either EU ID 13 or EU ID 23 operates.

- 32.2. Flare all gas from the reboiler and the flash tank of EU ID 23 in EU ID 12 at all times either EU ID 13 or 23 operates, in accordance with the manufacturer's operating procedures to achieve a minimum HAP and VOC destruction efficiency of 98%.
- 32.3. EU ID 12 shall be designed for and operated with no visible emissions except for periods not to exceed a total of five minutes during any two consecutive hours and except for periods of startup, shutdown, or malfunction.
- 32.4. Report in each quarterly facility operating report in Condition 98 an affirmation that Conditions 32.1 through 32.3 are met.
- 32.5. Report in accordance with Condition 97 if any of Conditions 32.1 through 32.4 are not met.

Insignificant Emissions Units

33. 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:
 - 33.1. **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)]
 - 33.2. **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)]
 - 33.3. **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)]
 - 33.4. **General MR&R for Insignificant Emissions Units:** The Permittee shall comply with the following:
 - a. Submit the compliance certifications of Condition 99 based on reasonable inquiry;
 - b. Comply with the requirements of Condition 80;
 - c. Report in the operating report required by Condition 98 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 33.1, 33.2, and 33.3.

[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 60 New Source Performance Standards (NSPS)

NSPS Subpart A – General Provisions

34. NSPS Subpart A Notification. Unless exempted by a specific subpart, for any affected facility⁷ or existing facility⁸ regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Administrator⁹ written notification or, if acceptable to both the EPA and the Permittee, electronic notification, as follows:

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

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

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

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

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

34.3. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 C.F.R. 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include¹⁰

- a. information describing the precise nature of the change,
- b. present and proposed emission control systems,
- c. productive capacity of the facility before and after the change, and
- d. the expected completion date of the change;

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

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

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

⁷ *Affected facility* means, with reference to a stationary source, any apparatus to which a standard applies, as defined in 40 C.F.R. 60.2.

⁸ *Existing facility* means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in 40 C.F.R. Part 60, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type, as defined in 40 C.F.R. 60.2.

⁹ The Department defines the “the Administrator” to mean “the EPA and the Department.”

¹⁰ The Department and EPA may request additional relevant information subsequent to this notice.

- a. the name and address of owner or operator,
- b. the location of the existing facility,
- c. a brief description of the existing facility and the components that are to be replaced,
- d. a description of the existing and proposed air pollution control equipment,
- e. an estimate of the fixed capital cost of the replacements, and of constructing a comparable entirely new facility,
- f. the estimated life of the existing facility after the replacements, and
- g. a discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.

35. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements. The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU IDs 1 through 5, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU IDs 1 through 5 is inoperative.

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

36. NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report. The Permittee shall submit excess emissions and monitoring systems performance (EEMSP)¹¹ report and/or summary report form (see Condition 37) to the Administrator semiannually, except when more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:

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

36.1. the magnitude of excess emissions, any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period;

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

36.2. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of EU IDs 1 through 5; the nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted; and

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

¹¹ The federal EEMSP report is not the same as the state excess emission report required by Condition 97. Excess emissions are defined in applicable subparts.

36.3. The date and time identifying each period during which a continuous monitoring system (CMS) was inoperative except for zero and span checks and the nature of any repairs or adjustments.

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

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

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

37. NSPS Subpart A Summary Report Form. The Permittee shall submit to the Department and to EPA one “summary report form” in the format shown in Figure 1 of 40 C.F.R. 60.7 (see Attachment A to the Statement of Basis) for each pollutant monitored for EU IDs 1 through 5. The report shall be submitted semiannually, postmarked by the 30th day following the end of each six-month period, except when more frequent reporting is specifically required by an applicable subpart or the EPA, as follows:

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

37.1. If the total duration of excess emissions for the reporting period is less than one percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than five percent of the total operating time for the reporting period, submit a summary report form **unless** the EEMSP report described in Condition 36 is requested.

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

37.2. If the total duration of excess emissions for the reporting period is one percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is five percent or greater of the total time for the reporting period, then submit a summary report form **and the EEMSP report** described in Condition 36.

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

38. NSPS Subpart A Recordkeeping. For EU IDs 1 through 5, the Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 C.F.R. Part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least five years, in accordance with Condition 93, following the date of such measurements, maintenance, reports, and records.

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

- 39. NSPS Subpart A Performance (Source) Tests.** The Permittee shall conduct source tests according to 40 C.F.R. 60.8 and Section 6 on any affected facility at such times as may be required by the Administrator, and shall provide the Department and EPA with a written report of the results of the source test.

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

- 40. NSPS Subpart A Good Air Pollution Control Practice (GAPCP).** At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU IDs 1 through 5 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU IDs 1 through 5.

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

- 41. NSPS Subpart A Credible Evidence.** For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 44 and 46 nothing in 40 C.F.R. Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1 through 5 would have been in compliance with applicable requirements of 40 C.F.R. Part 60 if the appropriate performance or compliance test or procedure had been performed.

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

- 42. NSPS Subpart A Concealment of Emissions.** The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Conditions 44, 46, or 50. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.

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

NSPS Subpart GG¹² – Stationary Gas Turbines, EU IDs 1 through 5

- 43. NSPS Subpart GG Applicability.** For EU IDs 1 through 5 listed in Table A, the Permittee shall comply with the applicable requirements for stationary gas turbines, which commenced construction, modification, or reconstruction after October 3, 1977, with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour based on the lower heating value of the fuel fired.

[18 AAC 50.040(a)(2)(V) & (j)(4) and 50.326(j)]

¹² The provisions of NSPS Subpart GG listed in Conditions 43 through 47 are current as amended through Feb. 27, 2014. 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.

[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.330(a) & (b), Subpart GG]

44. NSPS Subpart GG NO_x Standard. The Permittee shall not allow the exhaust gas concentration of NO_x, on a dry exhaust basis at 15 percent oxygen (O₂) and ISO standard day conditions,¹³ to exceed:

44.1. 220 ppmv for each of EU IDs 1 and 2; and

44.2. 172 ppmv for each of EU IDs 3 through 5.

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

45. NSPS Subpart GG NO_x MR&R Requirements. The Permittee shall monitor, record, and report compliance with the respective Subpart GG NO_x standard under Condition 44, as follows:

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

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

- a. **Periodic Testing.** For each turbine subject to Condition 44 that operates for 400 hours or more in any 12-month period during the life of this permit, the Permittee shall satisfy either Condition 45.1.a(i) or 45.1.a(ii).
- (i) For existing turbines whose latest emissions source testing was certified as operating at less than or equal to 90 percent of the most stringent NO_x limit shown in Condition 44, the Permittee shall conduct a NO_x and O₂ source test under 40 C.F.R. 60, Appendix A, Method 20, ASTM D6522-00, or Method 7E and either Method 3 or 3A, within the first applicable criteria below:
- (A) Within 5 years of the latest performance test; or
 - (B) Within 1 year of the effective date of this permit if the last source test occurred greater than five years prior to effective date of this permit and the 400-hour threshold was triggered within 6 months of the permit's effective date; or
 - (C) Within 1 year after exceeding 400 hours of operation in a 12-month period if the last source test occurred greater than 4 years prior to the exceedance.

¹³ ISO (*International Organization for Standardization*) standard day conditions means 288 degrees Kelvin (59 degrees F), 60 percent relative humidity and 101.3 kilopascals (14.7 psi) pressure. [ref. 40 C.F.R. 60.331(g)]

- (ii) For existing turbines whose latest emissions source testing was certified as operating at greater than 90 percent of the most stringent NO_x limit shown in Condition 44, the Permittee shall conduct a NO_x and O₂ source test under 40 C.F.R. 60, Appendix A, Method 20, or Method 7E and either Method 3 or 3A, annually until two consecutive tests show performance results certified at less than or equal to 90 percent of the most stringent NO_x limit shown in Condition 44.
- b. **Substituting Test Data.** The Permittee may use results of a source test completed under Condition 45.1.a performed on only one of a group of turbines to satisfy the requirements of the condition for the other turbines in the group if:
- (i) the Permittee demonstrates that test results are less than or equal to 90 percent of the most stringent NO_x limit shown in Condition 44, and are projected under Condition 45.1.c to be less than or equal to 90 percent of the most stringent limit at maximum load;
 - (ii) for any source test conducted after the effective date of this permit, the Permittee identifies in a source test plan under Condition 89:
 - (A) the turbine to be tested;
 - (B) the other turbines in the group that are to be represented by the test; and
 - (C) why the turbine to be tested is representative, including that each turbine in the group:
 - (1) is located at a stationary source operated and maintained by the Permittee;
 - (2) is tested under close to identical ambient conditions;
 - (3) is the same make and model and has identical injectors and combustor; and
 - (4) uses the same fuel type from the same supply origin.
 - (iii) The Permittee may not use substitute test results to represent emissions from a turbine or group of turbines if that turbine or group of turbines is operating at greater than 90 percent of the most stringent NO_x limit shown in Condition 44.
- c. **Load.** The Permittee shall comply with the following:

- (i) Conduct all tests under Condition 45.1 in accordance with 40 C.F.R. 60.335, except as otherwise approved in writing by the Department or by EPA if the circumstances of the Department or EPA approval are still valid at the time. For the highest load condition, if it is not possible to operate the turbine during the test at maximum load, the Permittee will test the turbine when operating at the highest load achievable by the turbine under the ambient and stationary source operating conditions in effect at the time of the test;
- (ii) Demonstrate in the source test plan whether the test is scheduled when maximum NO_x emissions are expected;
- (iii) If the highest operating rate tested is less than the maximum load of the tested turbine or another turbine represented by the test data:
 - (A) for each such turbine the Permittee shall provide to the Department as an attachment to the source test report:
 - (1) additional test information from the manufacturer or from previous testing of units in the group of turbines; if using previous testing of the group of turbines, the information must include all available test data for the turbines in the group, and
 - (2) a demonstration based on the additional test information that projects the test results from Condition 45.1 to predict the highest load at which emissions will comply with the limit in Condition 44.
 - (B) the Permittee shall not operate any turbine represented by the test data at loads for which the Permittee's demonstration predicts that emissions will exceed the limit in Condition 44;
 - (C) the Permittee shall comply with a written finding prepared by the Department that:
 - (1) the information is inadequate for the Department to reasonably conclude that compliance is assured at any load greater than the test load, and that the Permittee must not exceed the test load;
 - (2) the highest load at which the information is adequate for the Department to reasonably conclude that compliance assured is less than maximum load, and the Permittee must not exceed the highest load at which compliance is predicted; or
 - (3) the Permittee must retest during a period of greater expected demand on the turbine; and

- (D) the Permittee may revise a load limit by submitting results of a more recent Method 20, or Method 7E and either Method 3 or 3A, test done at a higher load, and, if necessary, the accompanying information and demonstration described in Condition 45.1.c(iii)(A); the new limit is subject to any new Department finding under Condition 45.1.c(iii)(C).
- (iv) In order to perform a source test required under Condition 45.1, the Permittee may operate a turbine at a higher load than that prescribed by Condition 45.1.c(iii).
- (v) For the purposes of Conditions 45.1 through 45.3, maximum load means the hourly average load that is the smallest of:
 - (A) 100 percent of manufacturer's design capacity of the gas turbine at ISO standard day conditions;
 - (B) the highest load allowed by an enforceable condition that applies to the turbine; or
 - (C) the highest load possible considering permanent physical restraints on the turbine or the equipment which it powers.

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

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

- a. The Permittee shall comply with the following for each turbine for which a demonstration under Condition 45.1.c(iii) does not show compliance with the NO_x limit in Condition 44 at maximum load:
 - (i) The Permittee shall keep records of:
 - (A) load; or
 - (B) as approved by the Department, surrogate measurements for load and the method for calculating load from those measurements.
 - (ii) Records in Condition 45.2.a shall be hourly or otherwise as approved by the Department.
 - (iii) Within one month after submitting a demonstration under Condition 45.1.c(iii)(A)(2) that predicts that the highest load at which emissions will comply is less than maximum load, or within one month of a Department finding under Condition 45.1.c(iii)(C), whichever is earlier, the Permittee shall propose to the Department how load or load surrogates will be measured, and shall propose and comply with a schedule for installing any necessary equipment and beginning monitoring. The Permittee shall comply with any subsequent Department direction on the load monitoring methods, equipment, or schedule.

- b. For any turbine subject to Condition 44, that will operate less than 400 hours in any 12 consecutive months, the Permittee shall keep monthly records of the hours of operation.

45.3. Reporting. The Permittee shall report as follows:

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

- a. In each operating report under Condition 98 the Permittee shall list for each turbine tested or represented by testing at less than maximum load and for which the Permittee must limit load under Condition 45.1.c(iii):
 - (i) the load limit;
 - (ii) the turbine identification; and
 - (iii) the highest load recorded under Condition 45.2.a during the period covered by the operating report.
- b. In each operating report under Condition 98 for each turbine for which Condition 45.1 has not been satisfied because the turbine normally operates less than 400 hours in any 12 consecutive months, the Permittee shall identify:
 - (i) the turbine;
 - (ii) the highest number of operating hours for any 12 consecutive months ending during the period covered by the report; and
 - (iii) any turbine that operated for 400 or more hours.
- c. The Permittee shall report under Condition 97 if:
 - (i) a test result exceeds the emission standard;
 - (ii) Method 20, or Method 7E and either Method 3 or 3A, testing is required under Condition 45.1.a(i) or 45.1.a(ii) but not performed; or
 - (iii) the turbine was operated at a load exceeding that allowed by Conditions 45.1.c(iii)(B) and 45.1.c(iii)(C); exceeding a load limit is deemed a single violation rather than a multiple violation of both monitoring and the underlying emission limit.

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

46. NSPS Subpart GG SO₂ Standard. For EU IDs 1 through 5, the Permittee shall not burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 wt%_{S_{fuel}} (8000 ppmw).

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

47. NSPS Subpart GG SO₂ MR&R Requirements. The Permittee shall monitor, record, and report compliance with the applicable Subpart GG SO₂ standard in Condition 46, as follows:

47.1. **Monitoring.** The Permittee shall monitor compliance with the Subpart GG SO₂ standard in Condition 46, as follows:

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

a. Monitor the total sulfur content of the fuel being fired in the turbine, except as provided in Condition 47.1.b. Determine the sulfur content of the fuel using total sulfur methods described in Condition 47.2. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4,000 ppmw), the Permittee may use ASTM D4084-82, 94, D5504-01, D6228-98, or Gas Processors Association Standard 2377-86 (all of which are incorporated by reference-see 40 C.F.R. 60.17), which measure the major sulfur compounds.

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

b. The Permittee may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 C.F.R. 60.331(u),¹⁴ regardless of whether an existing custom schedule approved by the Administrator requires such monitoring. The Permittee shall use the following source of information to make the required demonstration:¹⁵

[40 C.F.R. 60.334(h)(3), Subpart GG]

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

[40 C.F.R. 60.334(h)(3)(i), Subpart GG]

(ii) Representative fuel sampling data, which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in 40 C.F.R. 75, Appendix D, Section 2.3.1.4 or 2.3.2.4 is required.

[40 C.F.R. 60.334(h)(3)(ii), Subpart GG]

¹⁴ As defined in 40 C.F.R. 60.331(u), “*Natural gas* means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Equivalents of this in other units are as follows: 0.068 weight percent total sulfur, 680 parts per million by weight (ppmw) total sulfur, and 338 parts per million by volume (ppmv) at 20 degrees Celsius total sulfur. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

¹⁵ Periodic fuel sulfur monitoring under Condition 47.1.a and reporting under Conditions 47.4.a do not apply to Subpart GG turbines that have demonstrated that natural gas fuel meets the definition of 40 C.F.R. 60.331(u) as set out by Condition 47.1.b.

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

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

- d. The frequency of determining the sulfur content of the fuel is as follows:

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

- (i) *Gaseous fuel.* For owners and operators that elect not to demonstrate sulfur content using options in Condition 47.1.b, and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day.

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

- (ii) *Custom schedules.* Notwithstanding the requirements of Condition 47.1.d(i), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in 40 C.F.R. 60.334(i)(3)(i) and (i)(3)(ii), custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in Condition 46. The two custom sulfur monitoring schedules set forth in 40 C.F.R. 60.334(i)(3)(i)(A) through (D) and 60.334(i)(3)(ii) are acceptable without prior Administrative approval.

[40 C.F.R. 60.334(i)(3), Subpart GG]

[EPA Custom Fuel Monitoring Schedule, 5/12/2000]

- 47.2. **Test Methods and Procedures.** If the owner or operator is required under Condition 47.1.d to periodically determine the sulfur content of the fuel combusted in the turbine, the owner or operator shall analyze the samples for the total sulfur content of the fuel as follows:

[18 AAC 50.040(a)(2)(V), (j)(4) & 50.326(j)]

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

[40 C.F.R. 60.335(b)(10), Subpart GG]

- a. For gaseous fuels, use ASTM D1072-80, 90 (Reapproved 1994); D3246-81, 92, 96; D4468-85 (Reapproved 2000); or D6667-01 (all of which are incorporated by reference, see 40 C.F.R. 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the prior approval of the Administrator.

[40 C.F.R. 60.335(b)(10)(ii), Subpart GG]

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

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

- 47.3. **Recordkeeping.** The Permittee shall keep records as required by Conditions 47.1 and 47.2, and in accordance with Condition 93.

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

- 47.4. **Reporting.** The Permittee shall report as follows:

[18 AAC 50.040(a)(2)(V), (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

- a. For each affected unit monitored periodically to determine the fuel sulfur content under Condition 47.1.a, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 C.F.R. 60.7(c) as summarized in Condition 36, except where otherwise approved by a custom fuel monitoring schedule. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under Condition 36, periods of excess emissions and monitor downtime that shall be reported are defined as follows:

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

- (i) For samples of gaseous fuel obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.
- (ii) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample.

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

- b. If electing to comply with Condition 47.1.b, the Permittee shall include with the operating report under Condition 98 a certified statement indicating that the fuel gas combusted at the stationary source meets the definition of natural gas in 40 C.F.R. 60.331(u), pursuant to 40 C.F.R. 60.334(h)(3).

NSPS Subpart III¹⁶ – Compression Ignition Internal Combustion Engines (CI ICE), EU ID 22

48. NSPS Subpart III Applicability and General Compliance Requirements. For EU ID 22 listed in Table A, the Permittee shall comply with the applicable requirements for stationary CI ICE located in remote areas of Alaska¹⁷ whose construction¹⁸ commence after July 1, 2006.

48.1. For EU ID 22, the Permittee shall comply with the applicable provisions of 40 C.F.R. 60 Subpart A as specified in Table 8 to Subpart III, and applicable provisions of Subpart III as specified in Conditions 49 through 52.

[18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4200(a)(2), 60.4218 and Table 8, Subpart III]

49. NSPS Subpart III GAPCP. Except as permitted under Condition 51.1, the Permittee shall operate and maintain EU ID 22 and control device according to the manufacturer's written instructions, may change only those emission-related settings that are permitted by the manufacturer, and shall meet the requirements of Condition 50 and the applicable requirements of 40 C.F.R. 1068. In addition, the Permittee shall operate and maintain EU ID 22 that achieve the emissions standards as required in Condition 50 over the entire life of the engine.

[40 C.F.R. 60.4206, 60.4209, and 60.4211(a), Subpart III]

50. NSPS Subpart III Emission Standards. The Permittee shall comply with the following emission standards:

[18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

50.1. Exhaust emissions from EU ID 22 shall not exceed the following applicable exhaust emission standards:

- a. 4.0 g/kW-hr (or 3.0 g/hp-hr) for NMHC + NO_x;
- b. 5.0 g/kW-hr (or 3.7 g/hp-hr) for CO; and
- c. 0.30 g/kW-hr (or 0.22 g/hp-hr) for PM.

[40 C.F.R. 60.4201(a), 60.4205(c) & Table 4, Subpart III]
[40 C.F.R. 1039, Appendix I, Table 3]

51. NSPS Subpart III Monitoring and Recordkeeping. For EU ID 22, the Permittee shall comply with the following:

[18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i) & (ii) & (c)(6)]

¹⁶ The provisions of NSPS Subpart III listed in Conditions 48 through 53 are current as amended through August 30, 2024. 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.

¹⁷ *Remote areas of Alaska*, as defined in 40 C.F.R. 60.4219.

¹⁸ For the purposes of NSPS Subpart III, the date that construction commences is the date the engine is ordered by the owner or operator as defined in 40 C.F.R. 60.4200(a).

- 51.1. If the Permittee does not install, configure, operate, and maintain EU ID 22 and control devices according to the manufacturer's emission-related written instructions as required in Condition 49, or changes emission-related settings in a way that is not permitted by the manufacturer, the Permittee shall demonstrate compliance as follows:
- a. Keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.
 - b. In addition, conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

[40 C.F.R. 60.4209 and 60.4211(g)(2), Subpart III]

- 51.2. Demonstrate compliance with the emission standards by purchasing an engine certified to the applicable emission standards in Condition 50.1. The engines must be installed and configured according to the manufacturer's specifications, except as permitted in Condition 51.1.

[40 C.F.R. 60.4209 and 60.4211(c), Subpart III]

- 51.3. Demonstrate compliance with the emission standards by keeping records of engine manufacturer data indicating compliance with the applicable emission standards in Condition 50.1.

[40 C.F.R. 60.4209 and 60.4211(b)(3), Subpart III]

- 51.4. Comply with the following requirements for emergency stationary CI ICE under Subpart III:

- a. Operate EU ID 22 according to the requirements in Conditions 51.4.a(i) through 51.4.a(iii). In order for the engine to be considered an emergency stationary ICE, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in Conditions 51.4.a(i) through 51.4.a(iii), is prohibited. If the Permittee does not operate the engine according to the requirements in Conditions 51.4.a(i) through 51.4.a(iii), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.
 - (i) There is no time limit on the use of emergency stationary ICE in emergency situations.
 - (ii) The Permittee may operate EU ID 22 for the purpose specified in Conditions 51.4.a(ii)(A) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition

51.4.a(iii) counts as part of the 100 hours per calendar year allowed by this Condition 51.4.a(ii).

(A) EU ID 22 may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(iii) EU ID 22 may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in Condition 51.4.a(ii). The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[40 C.F.R. 60.4211(f)(1) – (3), Subpart III]

52. NSPS Subpart III Reporting. The Permittee shall report as follows:

52.1. If required to conduct a performance test under Condition 51.1, submit the results of the performance test according to the procedure in 40 C.F.R. 60.4214(f) and (g).

52.2. Report in accordance with Condition 97 if any of the requirements in Conditions 48 through 51 or 53 was not met.

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

53. NSPS Subpart III Deadline for Importing or Installing Stationary CI ICE in Previous Model Years. The Permittee shall comply with the following:

[18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

[40 C.F.R. 60.4200(a)(4), 60.4208(a) – (i), & 60.4216(e), Subpart III]

53.1. The Permittee shall not install stationary CI ICE units in previous (2007 – 2017) model years after the dates and as specified in 40 C.F.R. 60.4208(a) – (g).

[40 C.F.R. 60.4208(a) - (g), Subpart III]

53.2. In addition to the requirements specified in 40 C.F.R. 60.4201, 60.4202, 60.4204, and 60.4205, the Permittee shall not import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements and after the dates specified in 40 C.F.R. 60.4208(a) – (g).

[40 C.F.R. 60.4208(h), Subpart III]

- 53.3. The requirements of Condition 53 do not apply to stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

[40 C.F.R. 60.4208(i), Subpart III]

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

NESHAP Subpart A – General Provisions

- 54. 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

54.1. Table 2 to NESHAP Subpart HH for EU ID 23 listed in Table A; and

54.2. Table 8 to NESHAP Subpart ZZZZ for EU IDs 6 through 8 listed in Table A.

[18 AAC 50.040(c)(1), (23) & (39), 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]

[40 C.F.R. 63.764(a) & Table 2, Subpart HH]

NESHAP Subpart HH – Oil and Natural Gas Production Facilities

- 55. NESHAP Subpart HH Applicability.** The Permittee shall comply with applicable requirements for each triethylene glycol (TEG) dehydration unit located at oil and natural gas production facilities that are an area source of hazardous air pollutant (HAP) emissions.

[18 AAC 50.040(c)(13), 50.040(j), & 50.326(j)]

[40 C.F.R. 63.760(a) & (b)(2), Subpart HH]

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

- 55.1. Emissions for major source determination purposes can be estimated using the maximum natural gas or hydrocarbon liquid throughput, as appropriate, calculated in Conditions 55.1.a through 55.1.b. As an alternative to calculating the maximum natural gas or hydrocarbon liquid throughput, the owner or operator of a new or existing source may use the facility's design maximum natural gas or hydrocarbon liquid throughput to estimate the maximum potential emissions.

[40 C.F.R. 63.760(a)(1), Subpart HH]

- a. The owner or operator shall maintain records of the annual facility natural gas or hydrocarbon liquid throughput each year and upon request submit such records to the Administrator. If the facility annual natural gas or hydrocarbon liquid throughput increases above the maximum natural gas or hydrocarbon liquid throughput calculated in 40 C.F.R. 63.760(a)(1)(i)(A) or (a)(1)(i)(B), the maximum natural gas or hydrocarbon liquid throughput must be recalculated using the higher throughput multiplied by a factor of 1.2.

- b. The owner or operator shall determine the maximum values for other parameters used to calculate emissions as the maximum for the period over which the maximum natural gas or hydrocarbon liquid throughput is determined in accordance with 40 C.F.R. 63.760(a)(1)(i)(A) or (B). Parameters, other than glycol circulation rate, shall be based on either highest measured values or annual average. For estimating maximum potential emissions from glycol dehydration units, the glycol circulation rate used in the calculation shall be the unit's maximum rate under its physical and operational design consistent with the definition of potential to emit in 40 C.F.R. 63.2.

[40 C.F.R. 63.760(a)(1)(ii) & (iii), Subpart HH]

- 55.2. Any source that determines it is not a major source but has actual emissions for 5 tons per year or more of a single HAP, or 12.5 tons per year or more of a combination of HAP (i.e., 50 percent of the major source thresholds), shall update its major source determination within 1 year of the prior determination or October 15, 2012, whichever is later, and each year thereafter, using gas composition data measured during the preceding 12 months.

[40 C.F.R. 63.760(c), Subpart HH]

56. NESHAP Subpart HH General Standards. The Permittee shall comply with the following:

- 56.1. Except as specified in Condition 56.2, the owner or operator shall comply with the standards specified in Conditions 56.1.a through 56.1.c.

[40 C.F.R. 63.764(d), Subpart HH]

[40 C.F.R. 63.764(d)(2)(i) - (iii), Subpart HH]

- a. Determine the optimum glycol circulation rate using the equation under 40 C.F.R. 63.764(d)(2)(i).
- b. Operate the TEG dehydration unit such that the actual glycol circulation rate does not exceed the optimum glycol circulation rate determined in accordance with Condition 56.1.a. If the TEG dehydration unit is unable to meet the sales gas specification for moisture content using the glycol circulation rate determined in accordance with Condition 56.1.a, the owner or operator must calculate an alternate circulation rate using GRI-GLYCalc™, Version 3.0 or higher. The owner or operator must document why the TEG dehydration unit must be operated using the alternate circulation rate and submit this documentation with the initial notification in accordance with 40 C.F.R. 63.775(c)(7).

- c. Maintain a record of the determination specified in Condition 56.1.b in accordance with the requirements in Condition 58.3 and submit the Initial Notification in accordance with the requirements in 40 C.F.R. 63.775(c)(7). If operating conditions change and a modification to the optimum glycol circulation rate is required, the owner or operator shall prepare a new determination in accordance with Condition 56.1.a or 56.1.b and submit the information specified under 40 C.F.R. 63.775(c)(7)(ii) through (v).
- 56.2. The owner or operator is exempt from the requirements of Condition 56.1 if the criteria listed in Condition 56.2.a or 56.2.b are met, except that the records of the determination of these criteria must be maintained as required in Condition 58.2.

[40 C.F.R. 63.764(e)(1), Subpart HH]
[40 C.F.R. 71.6(a)(1)]

- a. The actual annual flowrate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day, as determined by the procedures specified in Condition 57.1; or
 - b. The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagrams per year, as determined by the procedures specified in Condition 57.2.
- 56.3. At all times the owner or operator must operate and maintain EU ID 23, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 C.F.R. 63.764(j), Subpart HH]
[40 C.F.R. 71.6(a)(1)]

57. NESHAP Subpart HH Test Methods, Compliance Procedures, and Compliance Demonstrations. The procedures of this paragraph shall be used to determine glycol dehydration unit natural gas flowrate, benzene emissions, or BTEX emissions.

[40 C.F.R. 63.772(b), Subpart HH]

- 57.1. The determination of actual flowrate of natural gas to a glycol dehydration unit shall be made using the procedures of either Condition 57.1.a or 57.1.b.

[40 C.F.R. 63.772(b)(1), Subpart HH]

- a. The owner or operator shall install and operate a monitoring instrument that directly measures natural gas flowrate to the glycol dehydration unit with an accuracy of plus or minus 2 percent or better. The owner or operator shall convert annual natural gas flowrate to a daily average by dividing the annual flowrate by the number of days per year the glycol dehydration unit processed natural gas.

- b. The owner or operator shall document, to the Administrator's satisfaction, the actual annual average natural gas flowrate to the glycol dehydration unit.
- 57.2. The determination of actual average benzene or BTEX emissions from a glycol dehydration unit shall be made using the procedures of either Condition 57.2.a or 57.2.b. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.

[40 C.F.R. 63.772(b)(2), Subpart HH]

- a. The owner or operator shall determine actual average benzene or BTEX emissions using the model GRIGLYCALC™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1); or
- b. The owner or operator shall determine an average mass rate of benzene or BTEX emissions in kilograms per hour through direct measurement using the methods in 40 C.F.R. 63.772(a)(1)(i) or (ii), or an alternative method according to 40 C.F.R. 63.7(f). Annual emissions in kilograms per year shall be determined by multiplying the mass rate by the number of hours the unit is operated per year. This results shall be converted to megagrams per year.

58. NESHAP Subpart HH Recordkeeping Requirements. Each owner or operator of a facility subject to NESHAP Subpart HH shall maintain records as follows:

[40 C.F.R. 63.774(b), Subpart HH]
[40 C.F.R. 71.6(a)(3)(ii)]

- 58.1. The owner or operator of an affected source subject to the provisions of NESHAP Subpart HH shall maintain files of all information (including all reports and notifications) required by NESHAP Subpart HH. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or period.

[40 C.F.R. 63.774(b)(1), Subpart HH]

- a. All applicable records shall be maintained in such a manner that they can be readily accessed.
- b. The most recent 12 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provide access within 2 hours after a request.
- c. The remaining 4 years of records may be retained offsite.
- d. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

58.2. An owner or operator of a glycol dehydration unit that meets the exemption criteria in Condition 56.2.a or 56.2.b shall maintain the records specified in Condition 58.2.a or 58.2.b, as appropriate, for that glycol dehydration unit.

[40 C.F.R. 63.774(d)(1), Subpart HH]

- a. The actual annual average natural gas throughput (in terms of natural gas flowrate to the glycol dehydration unit per day) as determined in accordance with Condition 57.1, or
- b. The actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with Condition 57.2.

58.3. The owner or operator of an area source not located within a UA plus offset and UC boundary must keep a record of the calculation used to determine the optimum glycol circulation rate in accordance with Condition 56.1.a or 56.1.b, as applicable.

[40 C.F.R. 63.774(f), Subpart HH]

58.4. The owner or operator of an affected source subject to NESHAP Subpart HH shall maintain records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment. The owner or operator shall maintain records of actions taken during periods of malfunction to minimize emissions in accordance with Condition 56.3, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[40 C.F.R. 63.774(g), Subpart HH]

59. NESHAP Subpart HH Reporting Requirements. The Permittee shall report as follows:

59.1. The owner or operator shall submit the analysis performed under Condition 55.1.

[40 C.F.R. 63.775(d)(9), Subpart HH]

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

59.2. *Notification of process change.* Whenever a process change is made, the owner or operator shall submit a report within 180 days after the process change is made. The report shall include:

[40 C.F.R. 63.775(f), Subpart HH]

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

- a. A brief description of the process change; and
- b. A description of any modification to standard procedures or quality assurance procedures.

59.3. All reports must be sent to the Administrator at the appropriate address listed in 40 C.F.R. 63.13. The Administrator or the delegated authority may request a report in any form suitable for the specific case (e.g., by commonly used electronic media such as Excel spreadsheet, on CD or hard copy).

[40 C.F.R. 63.764(b), Subpart HH]

[40 C.F.R. 63.775(g)(2), Subpart HH]

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

NESHAP Subpart ZZZZ¹⁹ – Stationary RICE, EU IDs 6 through 8 and 22

60. NESHAP Subpart ZZZZ Applicability. The Permittee shall comply with applicable requirements for existing²⁰ (EU IDs 6 through 8) and new²¹ (EU ID 22) stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions.

60.1. For EU IDs 6 through 8, existing stationary RICE units, the Permittee shall at all times comply with Conditions 61 through 64.

60.2. For EU ID 22, new stationary RICE unit, the Permittee shall meet the requirements of 40 C.F.R. 63 Subpart ZZZZ by meeting the requirements of 40 C.F.R. 60 Subpart IIII in Conditions 48 through 53. No further requirements apply for such engines under 40 C.F.R. 63.

[18 AAC 50.040(c)(23) & (j)(4) and 50.326(j)]

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

[40 C.F.R. 63.6585(c), 63.6590(a)(1)(iii), (a)(2)(iii) & (c)(1), and 63.6605(a), Subpart ZZZZ]

61. NESHAP Subpart ZZZZ GACPC, 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)]

61.1. At all times, operate and maintain EU IDs 6 through 8, 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 6 through 8.

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

61.2. 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

¹⁹ The provisions of NESHAP Subpart ZZZZ listed in Conditions 54 through 63 are current as amended through August 30, 2024. 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.

²⁰ 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.

²¹ In accordance with 40 C.F.R. 63.6590(a)(2)(iii), a stationary RICE located at an area source of HAP emissions is *new* if you commenced construction of the stationary RICE on or after June 12, 2006.

- 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)(4), 63.6640(a), & Table 6 (item 9), Subpart ZZZZ]

- 61.3. 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]

62. NESHAP Subpart ZZZZ Work and Management Practices Standards and

Monitoring. For EU IDs 6 through 8, the Permittee shall comply with the following work and management practices and monitoring requirements:

[18 AAC 50.040(c)(23) & (j)(4) and 50.326(j)]

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

[40 C.F.R. 63.6603(a) & (b)(1), 63.6640(a), and 63.6625(i), Subpart ZZZZ]

[Table 2d and Table 6, Subpart ZZZZ]

- 62.1. For EU IDs 6 through 8:

- 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 within 1 year + 30 days of the previous change, whichever comes first, except as allowed by Condition 62.4;
- (ii) Inspect air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and
- (iii) Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

[Table 2d (item 1 & Footnote 1), Subpart ZZZZ]

- 62.2. During periods of startup, the Permittee shall comply with Condition 61.3.

[Table 2d (item 1), Subpart ZZZZ]

- 62.3. Demonstrate continuous compliance with the requirements in Condition 62.1 by complying with Condition 61.2.

[40 C.F.R. 63.6640(a) & Table 6 (item 9), Subpart ZZZZ]

- 62.4. The Permittee has the option to utilize an oil analysis program in order to extend the specified oil and filter change requirements in Condition 62.1.a(i), as described below:

- a. The oil analysis must be performed at the same frequency specified for changing the oil and filter in Condition 62.1.a(i).

- b. The analysis program must, at a minimum, analyze the following three parameters: Total Base Number (for CI engines), 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 62.4.b(i) through 62.4.b(iii) are not exceeded, the Permittee is not required to change the oil and filter.
- d. If any of the limits in Conditions 62.4.b(i) through 62.4.b(iii) are exceeded, the Permittee must change the oil and filter 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 and filter 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]

63. 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)]

- 63.1. If electing to operate and maintain EU IDs 6 through 8 according to a maintenance plan developed by the Permittee as allowed under Condition 61.2.b, keep records of the maintenance conducted on EU IDs 6 through 8 in order to demonstrate that the stationary RICE and after-treatment control device (if any) are operated and maintained according to the maintenance plan.

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

- 63.2. If electing to utilize the oil analysis program described in Condition 62.4, keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil and filter changes for the engine.

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

- 63.3. 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 & Table 8, Subpart ZZZZ]
[40 C.F.R. 63.10(b)(1), Subpart A]

64. 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)]

64.1. Include in the operating report required by Condition 98, 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.

[40 C.F.R. 63.6640(e) and 63.6650(f) & (i), Subpart ZZZZ]

64.2. Notify the Department in accordance with Condition 97 if any of the requirements in Conditions 54 through 64 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 NESHAP

Subpart A – General Provisions & Subpart M – Asbestos

65. 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

66. 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]

67. 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]

68. 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

69. 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).

- 69.1. 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).
- 69.2. 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).
- 69.3. 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

- 70.** 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)]

- 71.** 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)]

- 72.** 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)]

- 73. 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]

- 74. 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:

74.1. potential to emit of 2832.82 TPY; or

74.2. 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]

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

- 75.1. 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 74.2. 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/>.
- 75.2. 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.
- 75.3. If no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit in Condition 74.1.

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

76. Good Air Pollution Control Practice (GAPCP). The Permittee shall do the following for EU IDs 9c, 11, 12, and Group C Heaters & Boilers:

- 76.1. Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;
- 76.2. Keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and
- 76.3. 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)]

77. 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)]

78. 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.

- 78.1. 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 78.1.a or to address the results of Department inspections that found potential problems; and
 - (ii) to prevent future dust problems.

78.2. The Permittee shall report according to Condition 80.3.

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

79. 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)]

80. 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)]

80.1. 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 80.
- 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 80; or
 - (ii) the Department notifies the Permittee that it has found a violation of Condition 80.

80.2. 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 80; and
- d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

80.3. Reporting. The Permittee shall report as follows:

- a. With each stationary source operating report under Condition 98, 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 97.

81. 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 standard²² listed in Conditions 27, 28, 29, 30, 31, 44, 46, 50, and 66 (refrigerants), the Permittee shall

- 81.1. take all reasonable steps to minimize levels of emissions that exceed the standard; and
- 81.2. report in accordance with Condition 97.1.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

82. 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:

- 82.1. 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
- 82.2. Include this condition in the annual certification required under Condition 99.

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

²² As defined in 18 AAC 50.990(106), the term “*technology-based emission standard*” means a best available control technology (BACT) standard; a lowest achievable emission rate (LAER) standard; a maximum achievable control technology (MACT) standard established under 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

Section 6. General Source Testing and Monitoring Requirements

- 83. 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)]

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

[18 AAC 50.220(b)]

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

84.2. 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.

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

85.1. 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]

85.2. 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]

85.3. 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]

85.4. 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 11 to record data.

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

85.5. 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]

85.6. 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]

85.7. 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]

86. 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)]

87. Test Exemption. The Permittee is not required to comply with Conditions 89, 90 and 91 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 3.2).

[18 AAC 50.345(a)]

88. 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)]

89. Test Plans. Except as provided in Condition 87, 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 83 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)]

90. Test Notification. Except as provided in Condition 87, 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)]

91. Test Reports. Except as provided in Condition 87, 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 94. 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)]

92. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in Conditions 7 and 33.2, 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

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

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

93.2. 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

94. 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.

94.1. 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)]

95. 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.

95.1. 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)]

96. 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)]

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

97.1. **Excess Emissions Reporting.** Except as provided in Condition 80, 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 97.1.d.
- d. Report all other excess emissions not described in Conditions 97.1.a, 97.1.b, and 97.1.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 98 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)]

97.2. **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 5.3.b and 10.3.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 98 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)]

97.3. **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)]

98. **Operating Reports.** During the life of this permit²³, the Permittee shall submit to the Department an operating report in accordance with Conditions 94 and 95 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.

- 98.1. 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.
- 98.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 98.1, the Permittee shall identify
 - a. the date of the excess emissions or permit deviation;
 - b. the equipment involved;
 - c. the permit condition affected;

²³ *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
- 98.3. When excess emissions or permit deviation reports have already been reported under Condition 97 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.
- 98.4. The operating report must include, for the period covered by the report, a listing of emissions monitored under Conditions 3.2.e, 8.2, 11.1, and 45.1.a which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report
- a. the date of the emissions;
 - b. the equipment involved;
 - c. the permit condition affected; and
 - d. the monitoring result which triggered the additional monitoring.
- 98.5. **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)]

99. 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 95.

- 99.1. 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.

- 99.2. **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.
- 99.3. 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, or electronically to the EPA's CDX and CEDRI online reporting system accessible via <http://cdx.epa.gov>.

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

100. 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:

- 100.1. **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:
- 250 TPY of NH₃, PM₁₀, PM_{2.5} or VOC; or
 - 2,500 TPY of CO, NO_x, or SO₂.
- 100.2. **Triennial inventory.** Every third year by April 30, if the stationary source's PTE for the previous calendar year does not meet any of the emission thresholds in Condition 100.1.
- 100.3. For reporting under Condition 100.2, the Permittee shall report the annual emissions and the required data elements under Condition 100.4 every third year for the previous calendar year as scheduled by the EPA.²⁴
- 100.4. For each emissions unit and the stationary source, include in the report the required data elements²⁵ 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>.
- 100.5. Submit the report in accordance with the submission instructions on the Department's Standard Permit Conditions webpage at <http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-xv-and-xvi-submission-instructions/>.

[18 AAC 50.040(j)(4), 50.200, 50.275, 50.326(j)(3), & 50.346(b)(8)]

²⁴ 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.).

²⁵ 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.

[40 C.F.R. 51.15, 51.30(a)(1) & (b)(1), and Appendix A to 40 C.F.R. 51 Subpart A]

101. 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.

101.1. For the purposes of reporting actual or assessable emissions required under Condition 100 and Condition 74.2, 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]

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

102.1. **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 98 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.

102.2. **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)]

103. Federal Electronic Reporting Allowance. Effective September 25, 2024, the Permittee may electronically submit in an acceptable digital format reports, notifications, or other required submission types in certain 40 C.F.R. 59, 60, 61, 62, and 63 Subparts that do not already have electronic reporting requirements (i.e., paper reports, notifications, or other submission types), via the CEDRI on the EPA's CDX, or to another EPA managed electronic document receiving system that may be designated for the receipt of specified submissions in the future.

- a. Additionally, performance test reports that do not already have Cross-Media Electronic Reporting Rule (CROMERR) compliant electronic reporting requirements may utilize the Electronic Reporting Tool (ERT) (see <https://www.epa.gov/electronicreporting-air-emissions/electronicreporting-tool-ert>) to submit those reports to CEDRI in the form of an ERT submission package.

- b. When a report, notification, or other submission type submitted under this new electronic submission option contains confidential business information (CBI), a file with the CBI omitted or redacted must be submitted to the CEDRI system and a separate, complete submission containing the claimed CBI information must be submitted through the described CBI submission process.

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

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

[40 C.F.R. 3.2(a)(2), Cross-Media Electronic Reporting; 89 Fed. Reg. 78300 (September 25, 2024)]

Section 8. Permit Changes and Renewal

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

- 104.1. 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;
- 104.2. 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;
- 104.3. 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
- 104.4. 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)]

105. 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)]

106. 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:

- 106.1. Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;
- 106.2. 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;
- 106.3. The change shall not qualify for the shield under 40 C.F.R. 71.6(f); and

106.4. 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)]

107. Operational Flexibility. The Permittee may make CAA Section 502(b)(10)²⁶ 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).

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

107.2. For each such change, the notification required by Condition 107.1 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.

107.3. The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 107.

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

108. Permit Renewal. To renew this permit, the Permittee shall submit to the Department and to EPA 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>**, according to the submittal instructions in Conditions 95 and 104. 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)]

²⁶ 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.

Section 9. Compliance Requirements

General Compliance Requirements

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

109.1. included and specifically identified in the permit; or

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

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

110. 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

110.1. an enforcement action;

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

110.3. denial of an operating permit renewal application.

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

111. 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)]

112. 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)]

113. 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

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

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

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

113.4. 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)]

Compliance Schedule

- 114.** 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)]

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.

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

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

115.2. 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)]

116. Table D 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 D 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 D - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
1 through 5	40 C.F.R. 60 Subpart GG, 60.332(a)(1)	EU IDs 1 through 5 are not Electric Utility Gas Turbines as defined in Subpart GG.
	40 C.F.R. 60 Subpart GG, 60.334(a), (b), & (d)	EU IDs 1 through 5 do not use water or steam injection.
	40 C.F.R. 60 Subpart GG, 60.334(e), (f)	EU IDs 1 through 5 were not constructed after July 8, 2004.
	40 C.F.R. 60. Subpart GG, 60.334(h)(2)	Hilcorp has not claimed an allowance for fuel bound nitrogen to calculate the applicable NO _x emission limit under 40 C.F.R. 60.332.
	40 C.F.R. 60 Subpart KKKK	Construction, modification, or reconstruction of EU IDs 1 through 5 commenced prior to the applicability date of February 18, 2005.
6, 7, 8	40 C.F.R. 60 Subpart IIII	EU IDs 6 through 8 commenced construction, modification, or reconstruction prior to the applicability date of July 11, 2005.
	40 C.F.R. 63 Subpart ZZZZ, 63.6600, 63.6601, 63.6602, 63.6610, 63.6611, 63.6625(d), 63.6645(b)-(f), operating limits under Table 2b per 63.6603(a)	Northstar Production Facility is not a major source of HAPs emissions. EU IDs 6 through 8 are not subject to any numerical emission standards.
	40 C.F.R. 63 Subpart ZZZZ, 63.6604, 63.6612, 63.6615, 63.6620, 63.6625(g), 63.6630, 63.6635, 63.6640(b) & (d), 63.6650(a)-(e), 63.6655(a) & (d), Table 2d, Item 3	Northstar Production Facility is not accessible by the FAHS. Per 40 C.F.R. 63.6603(b), EU IDs 6 through 8 are not subject to numerical CO emission limitations but must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 hp in Table 2d.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
6, 7	40 C.F.R. Subpart ZZZZ, 63.6625(a)-(c) & (f), 63.6640(f), 63.6650(g) & (h), 63.6655(b), (c) & (f)	EU IDs 6 and 7 are not emergency engines. EU IDs 6 and 7 are subject only to maintenance practices and need not perform monitoring or performance tests, nor use CEMS or CPMS. Northstar Production Facility does not use landfill/digester gas.
8	40 C.F.R. Subpart ZZZZ, 63.6625(a)-(c) & (f), 63.6640(f), 63.6650(g) & (h), 63.6655(b), (c) & (f)	EU ID 8 is subject only to maintenance practices and need not perform monitoring or performance tests, nor use CEMS or CPMS. Northstar Production Facility does not use landfill/digester gas.
9c	40 C.F.R. 60 Subpart E, Ea, Eb, AAAA, 40 C.F.R. 62 Subpart FFF, JJJ	EU ID 9c has a charging rate of less than 35 tons per day.
	40 C.F.R. 60 Subpart Ec	EU ID 9c does not combust hospital/medical/infectious waste.
	40 C.F.R. 60 Subpart O	EU ID 9c does not combust sewage sludge.
	40 C.F.R. Subpart CCCC	EU ID 9c did not commence construction after June 4, 2010 and did not commence reconstruction or modification after August 7, 2013.
	40 C.F.R. 61 Subpart E	EU ID 9c does not process mercury ore, use mercury chlor-alkali cells, or incinerate or dry wastewater treatment plant sludge.
	40 C.F.R. 62 Subpart III	EU ID 9c commenced construction after November 30, 1999.
	18 AAC 50.050(b)	EU ID 9c has a charging rate of less than 1,000 pounds per hour and does not combust wastewater treatment plant sludge.
13, 16 through 18	40 C.F.R. 60 Subpart D, Da, Db, & Dc	The heat input capacities of EU IDs 13 and 16 through 18 are below the applicability threshold.
16	40 C.F.R. 60 Subpart IIII, 60.4204(c), 60.4205(b), (d)-(e), 60.4207, 60.4209, 60.4211(d), 60.4213, 60.4214	EU ID 16 has a displacement less than 10 liters per cylinder, is not required to conduct performance tests, is a certified engine, is a fire pump engine, is not equipped with a particulate filter, and is located in an area of Alaska not accessible by the FAHS.
23	40 C.F.R. Subpart HH, 63.764(c), 63.766, 63.769, 63.775(b), 63.775(d)(3), & 63.775(e)	Northstar Production Facility is not a major source of HAP emissions.
	40 C.F.R. 63 Subpart HH, 63.764(d)(1), & 63.775(c)(2)-(6)	Northstar Production Facility is not located within a UA plus offset and UC boundary.
	40 C.F.R. 63 Subpart HH, 63.765, 63.771, 63.772(e)-(i), 63.773, 63.774(b)(3)-(8), 63.774(b)(10)-(11), 63.774(c), 63.774(e), 63.774(h), 63.775(d)(1)-(2), 63.775(d)(4)-(6), 63.775(d)(8), 63.775(d)(11)-(14), & 63.775(g)(1)	Northstar Production Facility is not required to control for air emissions as specified in 40 C.F.R. 63.764(c)(1)(i) or (d)(1)(i).
	40 C.F.R. 63 Subpart HH, 63.766, 63.769, 63.772(a), & 63.774(d)(2)	Northstar Production Facility is not a major source of HAP emissions and therefore according to 40 C.F.R. 63.760(b)(2), storage vessels, ancillary equipment, and compressors are not subject to this subpart.
23	40 C.F.R. 63 Subpart HH, 63.772(d)	EU ID 23 is not a small glycol dehydration unit.
Group C Turbines	40 C.F.R. 60 Subpart GG & KKKK	Group C – Intermittent Well Servicing Equipment, Turbines are not stationary.
Source wide	40 C.F.R. 60 Subparts D, Da, Db, Dc, K, Ka, Kb, & Kc	No affected EUs within the permitted stationary source.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	40 C.F.R. 60 Subparts J, Ja, GGG, GGGa, & QQQ	The stationary source does not meet the definition for a petroleum refinery.
	40 C.F.R. 60 Subpart KKK	The stationary source does not meet the definition for an onshore natural gas processing plant as defined in the subpart.
	40 C.F.R. 60 Subpart LLL	The stationary source does not operate natural gas sweetening unit(s).
	40 C.F.R. 60, Subpart OOOO, OOOOa, OOOOb, & OOOOc	Northstar Production Facility is on an artificial island and therefore an offshore stationary source.
	40 C.F.R. 61 Subpart J	No process components in benzene service, as defined by subpart (10% benzene by weight)
	40 C.F.R. 61 Subpart V	No process components in volatile hazardous air pollutant (VHAP) service, as defined by subpart (\geq 10% VHAP by weight).
	40 C.F.R. Subpart Y	Stationary source does not operate storage vessels in benzene service
	40 C.F.R. 61 Subpart BB	Stationary source does not conduct benzene transfer operations.
	40 C.F.R. 61 Subpart FF	Stationary source does not conduct benzene waste operations.
	40 C.F.R. 63 Subpart CC & UUU	Stationary source does not meet the definition for a petroleum refinery.
	40 C.F.R. 63 Subpart OO	Provisions only apply to tanks affected by 40 C.F.R. 60, 61, or 63 that specifically reference 40 C.F.R. 63 Subpart OO.
	40 C.F.R. 63 Subpart VV	Provisions only apply to oil-water separators and organic-water separators affected by 40 C.F.R. 60, 61, or 63 that specifically reference 40 C.F.R. 63 Subpart VV.
	40 C.F.R. 63 Subpart HHH	The stationary source does not transmit or store natural gas prior to entering the pipeline to a local distribution company or to a final end user and the stationary source is not a major source of HAPs.
	40 C.F.R. Subpart EEEE, YYYY, & DDDDD	The stationary source is not a major source of HAPs.
	40 C.F.R. 63 Subpart CCCCC	There are no stationary gasoline dispensing facilities located at Northstar Production Facility.
	40 C.F.R. 63 Subpart JJJJJ	All stationary heaters and boilers on the facility are gas fired. Temporary boilers are not subject to the subpart.

Section 11. 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	Start								
End	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					
Signature:				Date		Observer's Affiliation:			
Title		Date		Certifying Organization:		Date			
Certified By:									
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%:				Highest 18-Consecutive -Minute Average Opacity %(engines and turbines only)					
In compliance with six-minute opacity limit? (Yes or No)									
Average Opacity Summary:									
Set Number	Time		Opacity		Comments				
	Start	End	Sum	Average					

Section 12. SO₂ Material Balance Calculation

If a fuel shipment contains more than 0.75 percent sulfur by weight, calculate the three-hour exhaust concentration of SO₂ using the following equations:

A. = 31,200 x (wt%**S**_{fuel}) = 31,200 x _____ = _____

B. = 0.148 x (wt%**S**_{fuel}) = 0.148 x _____ = _____

C. = 0.396 x (wt%**C**_{fuel}) = 0.396 x _____ = _____

D. = 0.933 x (wt%**H**_{fuel}) = 0.933 x _____ = _____

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

F. = 20.9 – (vol%**O**_{2, exhaust}) = 20.9 – _____ = _____

G. = (vol%**O**_{2, exhaust}) ÷ F = _____ ÷ _____ = _____

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

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

SO₂ concentration = A ÷ I = _____ ÷ _____ = _____ ppm

The wt%**S**_{fuel}, wt%**C**_{fuel}, and wt%**H**_{fuel} are equal to the weight percents of sulfur, carbon, and hydrogen, respectively, in the fuel. These percentages should total 100%.

The fuel weight percent of sulfur (wt%**S**_{fuel}) is obtained pursuant to Condition 15.1.a(ii) or Condition 15.1.b. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (vol%**O**_{2, exhaust}) is obtained from oxygen meters, manufacturer’s data, or from the most recent analysis under 40 C.F.R. 60, Appendix A-2, Method 3, adopted by reference in 18 AAC 50.040(a), at the same emissions unit load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if wt%**S**_{fuel} = 1.0%, then enter 1.0 into the equations not 0.01 and if vol%**O**_{2, exhaust} = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.346(c)]

Section 13. Notification Form²⁷

Northstar Production Facility

Stationary Source Name

Hilcorp Alaska, LLC

Company Name

AQ0503TVP04

Air Quality Permit Number.

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 COBC²⁸, CO²⁹, or Settlement Agreement - Complete Section 2 and Certify

²⁷ Revised as of July 22, 2020.

²⁸ Compliance Order By Consent

²⁹ Compliance Order

Section 1. Excess Emissions

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

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

- | | |
|--|--|
| <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 /Limit Exceeded /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 94.)*

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)]

Section 14. Emission Factors for Primary Turbines

CO Emission Factors for Solar Mars 90

Operating Condition	Predictive Emission Rate (lbs/hr)
Below 0° F	
Low %NGP ($\leq 86\%$)	Maximum value of 367
Medium %NGP ($> 86\%, \leq 90\%$)	Average value of 317.8
High %NGP ($> 90\%$)	Maximum value of 30.8
Above 0° F	
Low %NGP ($\leq 86\%$)	Maximum value of 367
Medium %NGP ($> 86\%, \leq 90\%$)	Average value of 238.9
High %NGP ($> 90\%$)	Maximum value of 15.7

Note: %NGP is percent natural gas producer speed.

NO_x Emission Factors for Solar Mars 90

Operating Condition	Predictive Emission Rate (lbs/hr)
Below 0° F	
Very Low %NGP ($\leq 79\%$)	Maximum value of 6.2
Low %NGP ($> 79\%, \leq 90\%$)	$0.8029 \times (\%NGP) - 57.196$
High %NGP ($> 90\%, \leq 94.7\%$)	Average value of 20.4
Very High %NGP ($> 94.7\%$)	Average value of 28.4
Above 0° F	
Very Low %NGP ($\leq 84\%$)	Maximum value of 5.4
Low %NGP ($> 84\%, \leq 90\%$)	$1.2408 \times (\%NGP) - 98.796$
High %NGP ($> 90\%, \leq 94.7\%$)	Average value of 13.6
Very High %NGP ($> 94.7\%$)	Average value of 10.3

Note: %NGP is percent natural gas producer speed.

NO_x Emission Factors (lb/hr) for GE LM2500

Mean Daily Temperature (°F)	Average Daily Load	
	>75%	≤ 75%
≥ 59	21	18
< 59 and ≥ 10	23	20
< 10 and ≥ 0	37	34
< 0	20	19

CO Emission Factors (lb/hr) for GE LM2500

Mean Daily Temperature (°F)	Average Daily Load	
	>75%	≤ 75%
≥ 59	13	11
< 59 and ≥ 10	14	12
< 10 and ≥ 0	33	17
< 0	12	7