DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY OPERATING PERMIT

Permit No. AQ0214TVP04 Issue Date: PUBLIC COMMENT - November 30, 2020
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, **Nushagak Cooperative, Inc.**, for the operation of the **Dillingham Power Plant**.

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.

This operating permit becomes effective <insert date—30 days after issue date>.

Upon effective date of this permit, Operating Permit No. AQ0214TVP03 expires.

James R. Plosay, Manager
Air Permits Program

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Abbreviations and Acronyms

AAC.....Alaska Administrative Code
ADEC.....Alaska Department of Environmental Conservation
AS.....Alaska Statutes
ASTM.....American Society for Testing and Materials
BACT.....best available control technology
bHp.....brake horsepower
CAA or The Act.Clean Air Act
CDX.....Central Data Exchange
CEDRI.....Compliance and Emissions Data Reporting Interface
CFR.....Code of Federal Regulations
CI.....compression ignition
CO.....carbon monoxide
dscf.....dry standard cubic foot
EPA.....US Environmental Protection Agency
EU.....emissions unit
gph.....gallons per hour
gr/dscf.....grain per dry standard cubic foot (1 pound = 7000 grains)
HAPs.....hazardous air pollutants [as defined in AS 46.14.990]
hp.....horsepower
ICE.....internal combustion engine
ID.....emissions unit identification number
kPa.....kiloPascals
kW.....kilowatts
LAER.....lowest achievable emission rate
MACT.....maximum achievable control technology [as defined in 40 CFR 63]
MMBtu/hr.....million British thermal units per hour
MMscf.....million standard cubic feet
MR&R.....monitoring, recordkeeping, and reporting
NAICS.....North American Industrial Classification System
NESHAP.....National Emission Standards for Hazardous Air Pollutants [as contained in 40 CFR 61 and 63]
NH_3.....ammonia
NOx.....nitrogen oxides
NSPS.....New Source Performance Standards [as contained in 40 CFR 60]
O_2.....oxygen
PAL.....plantwide applicability limitation
Pb.....lead
$PM_{2.5}$.....particulate matter less than or equal to a nominal 2.5 microns in diameter
PM_{10}.....particulate matter less than or equal to a nominal 10 microns in diameter
ppm.....parts per million
ppmv, ppmvd.....parts per million by volume on a dry basis
psia.....pounds per square inch (absolute)
PSD.....prevention of significant deterioration
PTE.....potential to emit
RICE.....reciprocating internal combustion engine
SIC.....Standard Industrial Classification
SIP.....State Implementation Plan
SO_2.....sulfur dioxide
tph.....tons per hour
tpy.....tons per year
VOC.....volatile organic compound [as defined in 40 CFR 51.100(s)]
VOL.....volatile organic liquid [as defined in 40 CFR 60.111b, Subpart Kb]
vol%.....volume percent
wt%.....weight percent

Section 1. Stationary Source Information

Identification

Permittee:		Nushagak Cooperative, Inc. PO Box 350 Dillingham, AK 99576
Stationary Source Name:		Dillingham Power Plant
Location:		59º 02´ 35.24" North; 158º 28´ 07.12" West
Physical Address:		557 Kenny Wren Road Dillingham, AK 99576
Owner and Operator:		Nushagak Cooperative, Inc. PO Box 350 Dillingham, AK 99576
Permittee's Responsible Official:		James Denslinger, Power Plant Manager PO Box 350 Dillingham, AK 99576
Designated Agent:		James Denslinger, Power Plant Manager PO Box 350 Dillingham, AK 99576
Stationary Source and Building Contact:		James Denslinger, Power Plant Manager PO Box 350 Dillingham, AK 99576 (907) 842-6355 jdenslinger@nushagak.coop
Fee Contact and Permit:		James Denslinger, Power Plant Manager PO Box 350 Dillingham, AK 99576 (907) 842-6355 jdenslinger@nushagak.coop
Process Description:	SIC Code	4911 - Electric Services
	NAICS Code:	221112 - Electric power generation, fossil fuel

[18 AAC 50.040(j)(3) & 50.326(a)]
[40 CFR 71.5(c)(1) & (2)]

Section 2. Emissions Unit Inventory and Description

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

Table A - Emissions Unit Inventory

EU ID	Emissions Unit Name	Emissions Unit Description	Rating/Size	Installation Date
10	Diesel Engine	Caterpillar - Model 3516DI (S/N 73Z00232)	1,135 kW-e	1988
11	Diesel Engine	Caterpillar - Model 3512B (S/N 4AW-00411)	1,050 kW-e	2001
12	Diesel Engine	Caterpillar - Model 3512B (S/N CTB00217)	1,050 kW-e	2006
13	Diesel Engine	Caterpillar - Model 3512B (S/N CTB00228)	1,050 kW-e	2006
14	Diesel Engine	Caterpillar - Model 3512C (S/N LLA00724)	1,050 kW-e	2008
15	Diesel Engine	Caterpillar - Model 3512C (S/N LLA00727)	1,050 kW-e	2008
16	Diesel Engine	Caterpillar - Model 3456 (S/N 3PG01599)	455 kW-e	2009
17	Diesel Engine	Caterpillar - Model 3608 (S/N 6MC00599)	2,420 kW-e	2019
18	Diesel Engine	Caterpillar - Model 3608 (S/N 6MC00600)	2,420 kW-e	2019

[18 AAC 50.326(a)]
[40 CFR 71.5(c)(3)]

Section 3. State Requirements

Visible Emissions Standard

1. Industrial Process and Fuel-Burning Equipment Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU IDs 10 through 18 listed in Table A to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.040(j), 50.055(a)(1), & 50.326(j)]
[40 CFR 71.6(a)(1)]

1.1. For EU IDs 10 through 18, monitor, record, and report in accordance with Conditions 2 through 4.

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 CFR 71.6(a)(3) & (c)(6)]

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

Liquid Fuel-Burning Equipment

2. Visible Emissions Monitoring. When required by Condition 1.1, or in the event of replacement[1] during the permit term, the Permittee shall observe the exhaust of EU IDs 10 through 18 for visible emissions using either the Method 9 Plan under Condition 2.3 or the Smoke/No-Smoke Plan under Condition 2.4.

2.1. The Permittee may change the visible emissions monitoring plan for an emissions unit at any time unless prohibited from doing so by Condition 2.5.

2.2. The Permittee may for each unit elect to continue the visible emissions monitoring schedule specified in Conditions 2.3.b through 2.3.e or Conditions 2.4.b through 2.5 that remains in effect from a previous permit.

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 CFR 71.6(a)(3)(i)]

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

a. First Method 9 Observation. Except as provided in Condition 2.2 or Condition 2.5.c(ii), observe the exhaust of EU IDs 10 through 18 according to the following criteria:

(i) For any unit, observe emissions unit exhaust within 14 calendar days after changing from the Smoke/No-Smoke Plan of Condition 2.4.

(ii) Except as provided in Condition 2.3.a(iii), for any of EU IDs 10 through 18, observe exhaust within six months after the effective date of this permit.

[1] "*Replacement*," as defined in 40 CFR 51.166(b)(32).
[2] Visible emissions observations are not required during emergency operations.

(iii) For any unit replaced, observe exhaust for within 60 days of the newly installed emissions unit becoming fully operational. Except as provided in Condition 2.3.e, after the first Method 9 observation:

(A) For EU IDs 10 through 18, continue with the monitoring schedule of the replaced emissions unit.

b. Monthly Method 9 Observations. After the first Method 9 observation conducted under Condition 2.3.a, perform observations at least once in each calendar month that an emissions unit operates.

c. Semiannual Method 9 Observations. After at least three monthly observations under Condition 2.3.b, unless a six-consecutive-minute average opacity is greater than 15 percent and one or more individual observations are greater than 20 percent, perform semiannual observations:

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

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

d. Annual Method 9 Observations. After at least two semiannual observations under Condition 2.3.c, unless a six-consecutive-minute average opacity is greater than 15 percent and one or more individual observations are greater than 20 percent, perform annual observations:

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

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

e. Increased Method 9 Frequency. If a six-consecutive-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more individual observations are greater than 20 percent, then increase or maintain the observation frequency for that emissions unit to at least monthly intervals as described in Condition 2.3.b, and continue monitoring in accordance with the Method 9 Plan.

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

a. Initial Monitoring Frequency. Observe the emissions unit exhaust during each calendar day that the emissions unit operates for a minimum of 30 days.

b. Reduced Monitoring Frequency. If the emissions unit operates without visible emissions for 30 consecutive operating days as required in Condition 2.4.a, observe the emissions unit exhaust at least once in every calendar month that the emissions unit operates.

c. **Smoke Observed**. If visible emissions are observed, comply with Condition 2.5.

2.5. **Corrective Actions Based on Smoke/No Smoke Observations**. If visible emissions are present in the emissions unit exhaust during an observation performed under the Smoke/No Smoke Plan of Condition 2.4, then the Permittee shall either begin the Method 9 Plan of Condition 2.3 or

a. initiate actions to eliminate visible emissions from the emissions unit within 24 hours of the observation;

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

c. after completing the actions required under Condition 2.5.a,

(i) conduct smoke/no smoke observations in accordance with Condition 2.4

(A) at least once per day for the next seven operating days, and if applicable, until the initial 30-day observation period of Condition 2.4.a is completed; and

(B) continue as described in Condition 2.4.b; or

(ii) if the actions taken under Condition 2.5.a do not eliminate the visible emissions, or if subsequent visible emissions are observed under the schedule of Condition 2.5.c(i)(A), then observe the emissions unit exhaust using the Method 9 Plan unless the Department gives written approval to resume observations under the Smoke/No Smoke Plan. After observing visible emissions and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates visible emissions and restart the Smoke/No Smoke Plan under Condition 2.4.a.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 CFR 71.6(a)(3)(i)]

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

3.1. For all Method 9 observations,

a. the observer shall record the following:

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

3.2. If using the Smoke/No Smoke Plan of Condition 2.4, record the following information in a written log for each observation and submit copies of the recorded information upon request of the Department:

a. the date and time of the observation;

b. the EU ID of the emissions unit observed;

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

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

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

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

g. operating rate (load or fuel consumption rate or best estimate, if known).

3.3. The records required in Conditions 3.1 and 3.2 may be kept in electronic format.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 CFR 71.6(a)(3)(ii)]

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

4.1. In the first operating report required in Condition 114 under this permit term, the Permittee shall state the intention to either continue the visible emissions monitoring schedule in effect from the previous permit or reset the visible emissions monitoring schedule.

4.2. Include in each operating report required under Condition 114 for the period covered by the report:

a. which visible emissions plan of Condition 2 was used for each emissions unit; if more than one plan was used, give the time periods covered by each plan;

b. for all Method 9 Plan observations,

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

(ii) a summary to include:

(A) number of days observations were made;

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

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

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

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

4.3. Report under Condition 113:

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

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

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 CFR 71.6(a)(3)(iii)]

Particulate Matter (PM) Emissions Standard

5. Industrial Process and Fuel-Burning Equipment Particulate Matter. The Permittee shall not cause or allow particulate matter emitted from EU IDs 10 through 18 listed in Table A to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.040(j), 50.055(b)(1) & 50.326(j)]
[40 CFR 71.6(a)(1)]

5.1. For EU IDs 10 through 18, monitor, record and report in accordance with Conditions 6 through 8.

[18 AAC 50.040(j), 50.326(j) & 50.346(c)]
[40 CFR 71.6(a)(3) & (c)(6)]

PM MR&R

Liquid Fuel-Burning Engines

6. PM Monitoring. The Permittee shall conduct source tests on EU IDs 10 through 18 to determine the concentration of particulate matter in the exhaust of each emissions unit as follows:

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 CFR 71.6(a)(3)(i)]

6.1. If the result of any Method 9 observation conducted under Condition 2.3 for any of EU IDs 10 though 18 is greater than the criteria of Condition 6.2.a or Condition 6.2.b, the Permittee shall, within six months of that Method 9 observation, either

a. take corrective action and observe the emissions unit exhaust under load conditions comparable to those when the criteria were exceeded, following 40 CFR 60, Appendix A-4 Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations, to show that emissions are no longer greater than the criteria of Condition 6.2; or

b. except as exempted in Condition 6.4, conduct a PM source test according to requirements set out in Section 6.

6.2. Take corrective action or conduct a PM source test, in accordance with Condition 6.1 if any Method 9 observation under Condition 2.3 results in an 18-minute average opacity greater than

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

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

6.3. During each one-hour particulate matter source test run under Condition 6.1.b, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive-minute average opacity that was measured during each one-hour test run. Submit a copy of these observations with the source test report.

6.4. The PM source test requirements in Condition 6.1.b are waived for an emissions unit if

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

b. corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 2.3) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 6.2.

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

7.1. Within 30 calendar days of startup, the Permittee shall record the exhaust stack diameters of EU IDs 17 and 18.

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

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 CFR 71.6(a)(3)(ii)]

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

8.1. Notify the Department of any Method 9 observation results that are greater than the threshold of either Condition 6.2.a or Condition 6.2.b within 30 days of the end of the month in which the observations occurred. Include the dates, EU ID(s), and results when an observed 18-minute average opacity was greater than an applicable threshold in Condition 6.2.

8.2. In each operating report under Condition 114, include:

a. a summary of the results of any PM source test and visible emissions observations conducted under Condition 6; and

b. copies of any visible emissions observation results greater than the thresholds of Condition 6.2, if they were not already submitted.

8.3. Report the stack diameters of EU IDs 17 and 18 in the next operating report under Condition 114 following issuance of this permit.

8.4. Report in accordance with Condition 113:

a. anytime the results of a PM source test exceed the PM emissions standard in Condition 5; or

b. if the requirements under Condition 6.1 were triggered and the Permittee did not comply on time with either Condition 6.1.a or 6.1.b. Report the deviation within 24 hours of the date compliance with Condition 6.1 was required.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 CFR 71.6(a)(3)(iii)]

Sulfur Compound Emissions Standard

9. Sulfur Compound Emissions. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from EU IDs 10 through 18 to exceed 500 ppm averaged over three hours.

[18 AAC 50.040(j), 50.055(c) & 50.326(j)]
[40 CFR 71.6(a)(1)]

Sulfur Compound MR&R

Fuel Oil[3]*(EU IDs 10 through 18)*

10. Sulfur Compound Monitoring and Recordkeeping. The Permittee shall monitor fuel sulfur content for each shipment of fuel oil delivered to the stationary source in accordance with Condition 62.1.

10.1. If a load of fuel contains greater than 0.75 percent sulfur by weight, the Permittee shall calculate SO_2 emissions in ppm using either the SO_2 material balance calculation in Section 12 or Method 19 of 40 CFR 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).

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

11.1. If SO_2 emissions calculated under Condition 10.1 exceed 500 ppm, the Permittee shall report under Condition 113. When reporting under this condition, include the calculation under Condition 10.1.

11.2. The Permittee shall include in the operating report required by Condition 114 for each month covered by the report:

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 percent sulfur, the fuel sulfur of the shipment; and

c. for any fuel received with a sulfur content greater than 0.75 percent by weight, the calculated SO_2 emissions in ppm calculated under Condition 10.1.

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 CFR 71.6(a)(3)(iii)]

[3] *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 CFR 60.41b.

Ambient Standards and Increment Protection

12. For ambient air quality protection, the Permittee shall:

[Condition 5, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

12.1. limit the maximum sulfur content of fuel oil combusted to less than 0.5 weight percent sulfur (wt% S). Monitor, record, and report per Conditions 61 through 67;

12.2. comply with annual NOx limit in Condition 38;

12.3. maintain a minimum stack height of 16.6 meters above ground level, for all emissions units; and

12.4. maintain all emissions units with vertical uncapped stacks. 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.

[Conditions 5.1-5.4, Minor Permit AQ0214MSS02, date]
[40 CFR 71.6(a)(1) & (3)]

Best Available Control Technology (BACT) Requirements

13. Nitrogen Dioxide Requirements. For EU IDs 11 through 13:

[Conditions 6 & 6.1, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

13.1. Limit NOx emissions to no greater than 24.9 lb/hr per engine, expressed as NO_2, averaged over the duration of the emission performance test or any three consecutive hours.

13.2. Operate EU IDs 11 through 13 with a separate aftercooler loop and electronic controls set for low emission strategy.

[Conditions 6.1a & 6.1b, Minor Permit AQ0214MSS02, date]
[40 CFR 71.6(a)(1)]

13.3. No less than once per calendar year, verify that electronic controls are set for low emission strategy as required by Condition 13.2. Submit verification in the operating report required by Condition 114.

[Condition 6.1c, Minor Permit AQ0214MSS02, date]
[40 CFR 71.6(a)(3)]

13.4. Conduct NOx performance tests as follows:

[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3) & 71.6(c)(6)]

a. Tests shall be conducted in accordance with Section 6.

b. One representative engine may be tested for engines of the same make and model.

c. For engines whose latest source test results were certified at less than or equal to 90 percent of the limit in Condition 13.1, conduct a NOx source test no later than 5 years after the date the most recent source test was completed.

d. For engines whose latest source test results were certified at greater than 90 percent of the limit in Condition 13.1, conduct NOx source tests within one year after the last source test was completed until two consecutive tests show results certified at less than or equal to 90 percent of the limit in Condition 13.1.

e. A test conducted under Condition 18 or Condition 23 for a replacement unit for EU IDs 11 through 13 shall satisfy Condition 13 except for the source testing schedule of Condition 13.4.d.

13.5. Report in accordance with Condition 113 any time the limit in Condition 13.1 is exceeded.

[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3) & 71.6(c)(6)]

Plantwide Applicability Limitation (PAL) General Requirements

PAL Renewal

14. To request renewal of a PAL, the Permittee must submit a timely application to the Department. A timely application is one that is submitted at least 6 months prior to, but not earlier than 18 months from, the date of the PAL expiration. If the Permittee submits a complete application to renew the PAL within this time period, then the PAL shall continue to be effective until the revised permit with the renewed PAL is issued. The application to renew a PAL permit shall contain the information required in 40 CFR 52.21(AA)(10)(iii)(a) through (d). The dates to submit a renewal application for each PAL are as follows:

[Condition 109, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

14.1. To renew the NOx PAL in Condition 38, the Permittee shall submit an application no sooner than Month XX, 20XX, but no later than Month XX, 20XX.

14.2. To renew the CO PAL in Condition 44, the Permittee shall submit an application no sooner than Month XX, 20XX, but no later than Month XX, 20XX.

14.3. To renew the PM-10 PAL in Condition 50, the Permittee shall submit an application no sooner than Month XX, 20XX, but no later than Month XX, 20XX.

14.4. To renew the SO_2 PAL in Condition 56, the Permittee shall submit an application no sooner than Month XX, 20XX, but no later than Month XX, 20XX.

14.5. To renew the PM-2.5 PAL in Condition 68, the Permittee shall submit an application no sooner than Month XX, 20XX, but no later than Month XX, 20XX.

[Conditions 109.1-109.5, Minor Permit AQ0214MSS02, date]

[40 CFR 71.6(a)(1)]

PAL Expiration

15. Any PAL that is not renewed in accordance with Condition 14 shall expire at the end of the PAL effective period, and the requirements in 40 CFR 52.21(aa)(9)(i) through (v) shall apply.

[Condition 110, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

Increasing a PAL During the PAL Effective Period

16. A PAL emission limitation may be increased during the PAL effective period in accordance with the requirements of 40 CFR 52.21(aa)(11).

[Condition 111, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

Emissions from Startup, Shutdown and Malfunction

17. The Permittee shall include all emissions from startup, shutdown and malfunctions in the emissions calculations for showing compliance with the PAL limits established in Conditions 38, 44, 50, 56, and 68. In addition to including the emissions in the calculations the Permittee shall:

[Conditions 8, 28, 48, 69, and 82; Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

17.1. record the date and duration of the deviation from normal operation; and

17.2. report in the operating report, required by Condition 114, the date and duration of the deviation from normal operation.

[Conditions 8.1, 8.2, 28.1, 28.2, 48.1, 48.2, 69.1, 69.2, 82.1, and 82.2; Minor Permit AQ0214MSS02, date]

Ongoing Emission Factor Re-Validation Requirements for NOx, CO, PM-10, and PM-2.5 PALs

18. The Permittee shall:

[Conditions 9, 29, 49, and 84; Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

18.1. source test NOx, CO, PM-10, and PM-2.5 emissions from each emissions unit subject to the PALs or a representative emissions unit for a group of emissions units established under Condition 19 or 20 no later than five years from the date the most recent source tests were completed for PAL emission factor re-validation for the operating mode (Fuel Efficiency or Low-NOx).

[Conditions 9.1, 29.1, 49.1, and 83.1; Minor Permit AQ0214MSS02, date]

a. For the groupings established under Condition 19 and groupings under Condition 20, source test an emissions unit that was not source tested in the previous test unless otherwise directed or approved by the Department.

[Conditions 9.1a, 29.1a, 49.1a, and 83.1a; Minor Permit AQ0214MSS02, date]

18.2. perform the source tests within 5 percent of 50, 75, and 95 percent of peak load or at a minimum of three evenly-spaced load points in the normal operating range of the unit, including the minimum point in the normal operating range and 90-to-100 percent of peak load;

18.3. use methods contained in Section 6 to conduct the source tests; and

18.4. use the results of the source tests to revise the NOx, CO, PM-10, and PM-2.5 emission factors in lbs/kWh, used in Conditions 40, 46, 52, and 70, by the methods contained in Conditions 43, 49, 55, and 73.

[Conditions 9.2-9.4, 29.2-29.4, 49.2-49.4, and 83.2-83.4; Minor Permit AQ0214MSS02, date]

Emissions Unit Groupings for NOx, CO, PM-10, and PM-2.5 PALs

19. If the Permittee wishes to establish groupings or multiple groupings of emissions units with a representative emissions unit for each grouping, the Permittee shall comply with Conditions 19.1 and 19.2:

[Conditions 10, 30, 50, and 84; Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

19.1. submit a request to the Department no later than 90 days prior to the required source testing under Condition 18. The request shall identify the requested groupings and their representative emissions unit; and

19.2. submit a certification from a company official, with the request under Condition 19.1, that each grouping and representative emissions unit:

[Conditions 10.1 & 10.2, 30.1 & 30.2, 50.1 & 50.2, 84.1 & 84.2; Minor Permit AQ0214MSS02, date]

a. have the same horsepower rating and engine model;

b. have an identical generator size that they are driving; and

c. have the same configuration.

[Conditions 10.2a-10.2c, 30.2a-30.2c, 50.2a-50.2c, and 84.2a-84.2c; Minor Permit AQ0214MSS02, date]

19.3. Unless the Department provides a written objection within 30 days of receiving the request, the groupings are considered effective.

[Conditions 10.3, 30.3, 50.3, and 84.3; Minor Permit AQ0214MSS02, date]

20. The following emissions unit groupings are established for the NOx, CO, PM-10, and PM-2.5 PALs:

[Conditions 11, 31, 51, and 85; Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

20.1. EU IDs 11 through 13,

20.2. EU IDs 14 and 15, and

20.3. EU IDs 17 and 18.

[Conditions 11.1-11.3, 31.1-31.3, 51.1-51.3, and 85.1-85.3; Minor Permit AQ0214MSS02, date]

21. All emissions units that are not contained in a grouping established under Condition 19 or 20 shall be tested individually.

[Conditions 12, 32, 52, and 86; Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Emissions Unit or Related Equipment Addition or Replacement Requirements for NOx, CO, PM-10, and PM-2.5 PALs

22. If the Permittee adds a new emissions unit, replaces an emissions unit, or replaces an emissions unit's generator, the Permittee shall:

[Conditions 18, 38, 58, and 92; Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

22.1. no less than seven days in advance of the change under Condition 22, notify the Department of the:

[Conditions 18.1, 38.1, 58.1, and 93.1; Minor Permit AQ0214MSS02, date]

a. make, model and size of the replacement emissions unit and of the emissions unit being replaced or of the new emissions unit being added to the stationary source;

b. make, model and size of the replacement generator and the replaced generator; and

c. interim emission factors for NOx, CO, PM-10, and PM-2.5, in pounds per kilowatt hour for a new emissions unit. Interim emission factors for a new emissions unit shall be provided by or derived from the equipment vendor or other generally accepted source.

[Conditions 18.1a-18.1c, 38.1a-38.1c, 58.1a-58.1c, and 92.1a-92.1c; Minor Permit AQ0214MSS02, date]

22.2. use the interim emission factors provided under Condition 22.1.c for the compliance demonstration calculations under Conditions 40, 46, 52, and 70, until new emission factors are obtained from source testing under Condition 23.

[Conditions 18.2, 38.2, 58.2, and 92.2; Minor Permit AQ0214MSS02, date]

23. For all new emissions units or replacement emissions units the Permittee shall:

[Conditions 19, 39, 59, and 93; Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

23.1. source test each emissions unit, or a representative emissions unit for a group of emissions units established under Condition 19, within 90 days of initial startup of the emissions unit or the first unit of a grouping;

23.2. perform NOx, CO, PM-10, and PM-2.5 source tests within 5 percent of 50, 75, and 95 percent of peak load or at a minimum of three evenly-spaced load points in the normal operating range of the unit, including the minimum point in the normal operating range and 90-to-100 percent of peak load;

23.3. use methods contained in Section 6 to conduct the source test;

23.4. use the results of the source test to revise the emission factors, in lbs/kWh, used in Conditions 40, 46, 52, and 70, by the methods contained in Conditions 43, 49, 55, and 73; and

23.5. perform subsequent ongoing validation source testing in accordance with Condition 18.

[Conditions 19.1-19.5, 39.1-39.5, 59.1-59.5, and 93.1-93.5; Minor Permit AQ0214MSS02, date]

24. If the Permittee replaces a generator driven by an emissions unit subject to the PALs, and the replacement generator is not the same make, model, and rating as the replaced generator, the Permittee shall comply with Conditions 23.1 through 23.5.

[Conditions 20, 40, 60, and 94; Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Operating Mode for NOx, CO, PM-10, and PM-2.5 PALs

25. No less than seven days in advance of reconfiguring an engine to operate in a different operating mode (Fuel Efficiency or Low-NOx mode), the Permittee shall provide written notification to the Department that includes:

[Condition 105, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

25.1. the expected date the change will be made; and

25.2. the emission factors that, per Condition 26 or 28 will be used to calculate monthly emissions in accordance with Conditions 40, 46, 52, and 70.

[Conditions 105.1 & 105.2, Minor Permit AQ0214MSS02, date]

26. The Permittee shall comply with Conditions 26.1 through 26.3 after an emission unit subject to the PALs in this permit changes operating mode, if unexpired, approved emission factors for the new operating mode do not exist for the emission unit or for a representative emission unit in a grouping to which the reconfigured emission unit belongs.

[Condition 106, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

26.1. Submit, with the notification required by Condition 25, interim emission factors for NOx, CO, PM-10, and PM-2.5 in units of pounds of emissions per kilowatt-hour that are either

[Condition 106.1, Minor Permit AQ0214MSS02, date]

a. provided by or derived from the equipment vendor or other generally accepted source, or

b. derived from source testing the reconfigured emission unit or a representative emission unit in a grouping to which the reconfigured emission unit belongs, and which source testing was conducted more than 5 years previous to the date of reconstruction.

[Conditions 106.1a & 106.1b, Minor Permit AQ0214MSS02, date]

26.2. Use the interim PAL pollutant emission factors submitted under Condition 26.1 to calculate monthly average emissions per Conditions 40, 46, 52, and 70 until source testing is performed, as required by Condition 26.3, and the Department approves the resultant emission factors per Condition 27.

26.3. Conduct source testing as follows on the reconfigured emission unit and submit resultant emission factors in units of pounds of emissions per kilowatt-hour for approval in accordance with Condition 27.

[Conditions 106.2 & 106.3, Minor Permit AQ0214MSS02, date]

a. Within 120 days of restarting the emission unit or units in the new operating mode, source test NOx, CO, PM-10, and PM-2.5 emissions from the unit.

b. Perform the source tests within 5 percent of 50, 75, and 95 percent of peak load or at a mimimum of three evenly-spaced load points in the normal operating range of the unit, including the minimum point in the normal operating range and 90-to-100 percent of peak load.

[Conditions 106.3a & 106.3b, Minor Permit AQ0214MSS02, date]

27. Within 90 days after completing an initial mode-switch source test required under Condition 26.3, the Permittee shall submit the resulting load-specific emission factors for Department approval. In addition to the new emission factors, the Permittee shall submit updated tables of all currently approved load and operating mode-specific emission factors for all PAL pollutants and indicate the month and year source testing was conducted to produce each set of emission factors. The Permittee shall also submit an updated table indicating the current operating mode configuration (Fuel Efficiency or Low-NOx Mode) for each emission unit.

[Condition 107, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

27.1. If the Department does not object within 30 days of the Department's receipt of the submittal, then the emission factors will be considered accepted.

27.2. If the emission factors obtained from source testing under Condition 26.3 are accepted, they shall:

[Conditions 107.1 & 107.2, Minor Permit AQ0214MSS02, date]

a. be used by the Permittee to demonstrate compliance with the PALs in this permit under Conditions 40, 46, 52, and 70 for the full calendar month of the approval forward; and

b. remain in effect until rescinded and replaced by site-specific emission factors that are established through source testing, provided such time period is less than five years; and

c. expire if not revalidated or revised by source testing within 5 years of completing the most recent source test.

[Conditions 107.2a-107.2c, Minor Permit AQ0214MSS02, date]

27.3. If the Department rejects the emission factors submitted under Condition 27, the Department will provide to the Permittee its findings and the required actions prior to resubmittal. The Permittee shall continue to use the last Department approved emission factors when performing the calculations under Conditions 40, 46, 52, and 70 for the monthly compliance demonstrations.

[Condition 107.3, Minor Permit AQ0214MSS02, date]

28. The Permittee shall comply with Conditions 28.1 and 28.2 after an emission unit subject to the PALs in this permit changes operating mode, if emission factors for the new configuration are available for the emission unit or for a representative emission unit in a grouping to which the reconfigured emission unit belongs and the existing emission factors are approved and unexpired.

[Condition 108, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

28.1. Submit, with the notification required by Condition 25, the existing approved and unexpired emission factors for NOx, CO, PM-10, and PM-2.5 in units of pounds of emissions per kilowatt-hour. Include in the notice the date or dates source testing was performed to produce the emission factors and the date or dates that the emission factors were accepted.

28.2. Use the approved PAL pollutant emission factors submitted per Condition 28.1 to calculate monthly emissions per Conditions 40, 46, 52, and 70 as long as the existing emission factors remain valid (see Condition 27.2).

[Conditions 108.1 & 108.2, Minor Permit AQ0214MSS02, date]

Monitoring for NOx, CO, PM-10, and PM-2.5 PALs

29. For each emissions unit that is subject to the NOx, CO, PM-10, and PM-2.5 PALs, the Permittee shall monitor the kilowatt-hours of electricity produced for each operating mode with a meter accurate to within plus or minus one percent. This shall be accomplished monthly (calendar) for the full effective period of the PALs. The kilowatt-hours shall be read on the last day of each calendar month, within 3 hours of changing operating mode, and within 3 hours of the end of the effective period of the PALs.

[Conditions 21, 41, 61, and 95; Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

PAL Recordkeeping Requirements

30. The Permittee shall retain a copy of the following records for the duration of the PAL effective period plus 5 years:

[Condition 101, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

30.1. A copy of the PAL permit application and any applications for revisions to the PAL; and

30.2. Each annual certification of compliance pursuant to title V and the data relied on in certifying the compliance.

[Conditions 101.1 & 101.2, Minor Permit AQ0214MSS02, date]

31. The Permittee must retain any records required in Conditions 14 through 73 on site. These records may be retained in an electronic format.

[Condition 102, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Recordkeeping for NOx, CO, PM-10, and PM-2.5 PALs

32. For each emissions unit subject to the NOx, CO, PM-10, and PM-2.5 PALs, the Permittee shall retain records of the monthly kilowatt-hours of electricity produced for each operating mode, for five calendar years beyond the effective period of the PALs.

33. The Permittee shall retain records of the monthly and rolling 12-month emissions calculated in Conditions 40, 41, 46, 47, 52, 53, 70, and 71 for the full effective period of the PALs and for an additional five calendar years beyond the effective period of the PALs.

34. If there is a gap in the data records maintained by the Permittee for NOx, CO, PM-10, or PM-2.5 emissions or for the kilowatt-hours produced for any emissions unit, the Permittee shall report as a permit deviation per Conditions 37 and 113.

[Conditions 22-24, 42-44, 62-64, and 96-98; Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Reporting for NOx, CO, PM-10, and PM-2.5 PALs

35. The Permittee shall report the:

[Conditions 25, 45, 65, and 99, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

35.1. monthly and rolling 12-month kilowatt-hours produced for each operating mode, in the operating report required by Condition 114; and

35.2. monthly emissions calculated by Conditions 40, 46, 52, and 70, in the operating report required by Condition 114.

[Conditions 25.1 & 25.2, 45.1 & 45.2, 65.1 & 65.2, and 99.1 & 99.2; Minor Permit AQ0214MSS02, date]

Semi-annual Operating Report

36. In addition to any other information required by this permit, each semi-annual operating report required by Condition 114 shall also contain

[Condition 103, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

36.1. the identification of the owner, operator and permit number;

36.2. for NOx, CO, PM-10, and PM-2.5, the total annual emissions in tons per year, on a rolling 12-month total for each month in the reporting period;

36.3. all data relied upon, including, but not limited to, any quality assurance or quality control data, in calculating the monthly and annual PAL pollutant emissions;

36.4. a list of any emissions units modified or added to the major stationary source during the preceding six-month period;

36.5. the number, duration and cause of any deviations or monitoring malfunctions (other than the time associated with zero and span calibration checks), and any corrective actions taken; and

36.6. a notification of shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system, and whether the emissions units monitored by the system continued to operate, and the calculation of the emissions of the pollutant or the number determined by method included in the permit, as provided under 40 CFR 52.21(aa)(12)(vii).

[Conditions 103.1-103.6, Minor Permit AQ0214MSS02, date]

Excess Emissions and Permit Deviation Reports

37. In addition to any other information required by this permit, each excess emissions and permit deviation report required by Condition 113 shall also contain

[Condition 104, Minor Permit AQ0214MSS02, date]

[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

37.1. the identification of owner, operator and permit number;

37.2. the PAL requirement that experienced the deviation or that was exceeded; and

37.3. emissions resulting from the deviation or the exceedance.

[Conditions 104.1-104.3, Minor Permit AQ0214MSS02, date]

NOx PAL

38. The Permittee shall limit stationary source-wide NOx emissions to less than 363.6 tons for each rolling 12-month period.

[Condition 7, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

Calculation Methodology

39. For each of EU IDs 10 through 18, comply with the following to calculate the average monthly engine load:

[Condition 13, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

39.1. At the same time each month, record total monthly energy production (kWh) and operating time (hours).

39.2. Divide the total monthly energy production by the number of hours the emission unit operated during the month (hr/month) to determine the average power (kW) for the month.

39.3. Divide the average power for the month by the emission unit's maximum power rating (kW) and multiply by 100 to determine the average monthly load.

[Conditions 13.1-13.3, Minor Permit AQ0214MSS02, date]

40. Within 30 calendar days from the start of the first day of a calendar month, the Permittee shall calculate the NOx emissions for each emissions unit subject to the NOx PAL, for the previous calendar month, using Equation 1 and as follows:

[Condition 14, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Equation 1 $$NO_X = EF \times kWh \left(\frac{1\,ton}{2000\,lb} \right)$$

Where: NOx = NOx emissions in tons per month for one emissions unit

kWh = A given emissions unit's monthly kilowatt-hours for a given operating mode. The Permittee must use maximum

rated capacity for any period of operating time that there is no monitoring data.

EF = Department approved emission factor as described in Conditions 42, 43, 22.1.c, 23, 24, and 26 through 28 for a given emissions unit based on average monthly load and for a given operating mode. The Permittee must use the maximum emission factor for a given emissions unit and operating mode if average monthly load is less than 50 percent. The Permittee, at their discretion, may use the maximum emission factor for a given emissions unit and operating mode for any other emission calculations.

40.1. Sum the monthly NOx emissions for each operating mode to obtain the total monthly NOx emissions for each emissions unit subject to the NOx PAL.

[Condition 14.1, Minor Permit AQ0214MSS02, date]

41. For each month during the NOx PAL effective period, add the sum of the previous month's NOx emissions from all emissions units subject to the NOx PAL to the sum of the preceding 11 months of NOx emissions from all emissions units subject to the NOx PAL to get the rolling 12-month plantwide NOx emissions total. If the NOx value calculated exceeds the NOx limit contained in Condition 38, the Permittee shall report in accordance with Conditions 37 and 113.

[Condition 15, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Emission Factors

42. Prior to implementing new emission factors under Condition 43.2, use the Department approved NOx emission factors contained in Table B to calculate NOx emissions under Condition 40.

43. Within 90 days after completing a required re-validation source test under Condition 18 or initial source test under Condition 23, the Permittee shall submit the resulting load- and operating-mode-specific NOx emission factors for Department approval. In addition to the new NOx emission factors, the Permittee shall submit updated tables of all currently approved load and operating mode-specific emission factors for all PAL pollutants and indicate the month and year source testing was conducted to produce each set of emission factors. The Permittee shall also submit an updated table indicating the current operating mode configuration (Fuel Efficiency or Low-NOx Mode) for each emission unit.

[Conditions 16 & 17, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

43.1. If the Department does not object within 30 days of the Department's receipt of the submittal, then the emission factor will be considered accepted.

43.2. If the emission factor obtained from source testing is accepted, it shall:

[Conditions 17.1 & 17.2, Minor Permit AQ0214MSS02, date]

a. rescind and replace the NOx emission factor that is currently in place to demonstrate compliance with the NOx PAL;

b. be used by the Permittee to demonstrate compliance with the NOx PAL under Condition 40 for the full calendar month of the approval forward; and

c. remain in effect until it is rescinded and replaced by a site specific NOx emission factor that is established through source testing.

[Conditions 17.2a-17.2c, Minor Permit AQ0214MSS02, date]

43.3. If the Department rejects the submitted emission factor, the Department will provide to the Permittee its findings and the required actions prior to resubmittal. The Permittee shall continue to use the last Department approved emission factor when performing the calculations under Condition 40, for the monthly compliance demonstration.

[Condition 17.3, Minor Permit AQ0214MSS02, date]

Table B – Department Approved NOx Emission Factors

EU ID	Operating Mode	NOx Emission Factor (lb/kW-hr)	Load Range (% of Full Load)	Test Date
10	Fuel Efficiency	0.0400	50	Sep 2017
		0.0375	> 50 and < 75	
		0.0350	75	
		0.0330	> 75 and < 100	
		0.0310	100	
	Low NOx	-	-	-
11, 12, 13	Low NOx	0.0210	50	May 2018
		0.0225	> 50 and < 75	
		0.0240	75	
		0.0235	> 75 and < 100	
		0.0230	100	
14, 15	Fuel Efficiency	0.0110	50	Sep 2017
		0.0120	> 50 and < 75	
		0.0130	75	
		0.0145	> 75 and < 100	
		0.0160	100	
	Low NOx	-	-	-
16	Fuel Efficiency	0.0280	50	May 2020
		0.0255	> 50 and < 67	
		0.0230	67	
		0.0215	> 67 and < 83	
		0.0200	83	
		0.0185	> 83 and < 100	
		0.0170	100	
	Low NOx	-	-	-
17, 18	Fuel Efficiency	0.0440	50	Aug 2019
		0.0435	> 50 and < 67	
		0.0430	67	
		0.0410	> 67 and < 83	
		0.0390	83	
		0.0370	> 83 and < 100	
		0.0350	100	
	Low NOx	-	-	-

CO PAL

44. The Permittee shall limit stationary source-wide CO emissions to less than 160.8 tons for each rolling 12-month period.

[Condition 27, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Calculation Methodology

45. Calculate average monthly load in accordance with Condition 39.

46. Within 30 calendar days from the start of the first day of a calendar month, the Permittee shall calculate the CO emissions for each emissions unit subject to the CO PAL, for the previous calendar month, using Equation 2 and as follows:

[Conditions 33 & 34, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Equation 2 $$CO = EF \times kWh\left(\frac{1\,ton}{2000\,lb}\right)$$

Where: CO = CO emissions in tons per month for one emissions unit

kWh = A given emissions unit's monthly kilowatt-hours for a given operating mode. The Permittee must use maximum rated capacity for any period of operating time that there is no monitoring data.

EF = Department approved emission factor as described in Conditions 48, 49, 22.1.c, 23, 24, and 26 through 28 for a given emissions unit based on average monthly load and for a given operating mode. The Permittee must use the maximum emission factor for a given emissions unit and operating mode if average monthly load is less than 50 percent. The Permittee, at their discretion, may use the maximum emission factor for a given emissions unit and operating mode for any other emission calculations.

46.1. Sum the monthly CO emissions for each operating mode to obtain the total monthly CO emissions for each emissions unit subject to the CO PAL.

[Condition 34.1, Minor Permit AQ0214MSS02, date]

47. For each month during the CO PAL effective period, add the sum of the previous month's CO emissions from all emissions units subject to the CO PAL to the sum of the preceding 11 months of CO emissions from all emissions units subject to the CO PAL to get the rolling 12-month plantwide CO emissions total. If the CO value calculated exceeds the CO limit contained in Condition 44, the Permittee shall report in accordance with Conditions 37 and 113.

[Condition 35, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Emission Factors

48. Prior to implementing new emission factors under Condition 49.2, use the Department approved CO emission factors contained in Table C to calculate CO emissions under Condition 46.

49. Within 90 days after completing a required re-validation source test under Condition 18 or initial source test under Condition 23, the Permittee shall submit the resulting load- and operating-mode-specific emission factors for Department approval. In addition to the new CO emission factors, the Permittee shall submit updated tables of all currently approved load and operating mode-specific emission factors for all PAL pollutants and indicate the month and year source testing was conducted to produce each set of emission factors. The Permittee shall also submit an updated table indicating the current operating mode configuration (Fuel Efficiency or Low-NOx Mode) for each emission unit.

[Conditions 36 & 37, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

49.1. If the Department does not object within 30 days of the Departments receipt of the submittal, then the emission factor will be considered accepted.

49.2. If the emission factor obtained from source testing is accepted, it shall:

[Conditions 37.1 & 37.2, Minor Permit AQ0214MSS02, date]

a. rescind and replace the CO emission factor that is currently in place to demonstrate compliance with the CO PAL;

b. be used by the Permittee to demonstrate compliance with the CO PAL under Condition 46 for the full calendar month of the approval forward; and

c. remain in effect until it is rescinded and replaced by a site specific CO emission factor that is established through source testing.

[Conditions 37.2a-37.2c, Minor Permit AQ0214MSS02, date]

49.3. If the Department rejects the submitted emission factor, the Department will provide to the Permittee its findings and the required actions prior to resubmittal. The Permittee shall continue to use the last Department approved emission factor when performing the calculations under Condition 46, for the monthly compliance demonstration.

[Condition 37.3, Minor Permit AQ0214MSS02, date]

Table C – Department Approved CO Emission Factors

EU ID	Operating Mode	CO Emission Factor (lb/kW-hr)	Load Range (% of Full Load)	Test Date
10	Fuel Efficiency	0.0010	50	Sep 2017
		0.0010	> 50 and < 75	
		0.0009	75	
		0.0010	> 75 and < 100	
		0.0010	100	
	Low NOx	-	-	-
11, 12, 13	Low NOx	0.0005	50	May 2018
		0.0008	> 50 and < 75	
		0.0010	75	

EU ID	Operating Mode	CO Emission Factor (lb/kW-hr)	Load Range (% of Full Load)	Test Date
		0.0015	> 75 and < 100	
		0.0019	100	
14, 15	Fuel Efficiency	0.0015	50	Sep 2017
		0.0010	> 50 and < 75	
		0.0005	75	
		0.0004	> 75 and < 100	
		0.0003	100	
	Low NOx	-	-	-
16	Fuel Efficiency	0.0010	50	May 2020
		0.0010	> 50 and < 67	
		0.0010	67	
		0.0010	> 67 and < 83	
		0.0010	83	
		0.0015	> 83 and < 100	
		0.0020	100	
	Low NOx	-	-	-
17, 18	Fuel Efficiency	0.0023	50	Aug 2019
		0.0020	> 50 and < 67	
		0.0016	67	
		0.0016	> 67 and < 83	
		0.0015	83	
		0.0016	> 83 and < 100	
		0.0017	100	
	Low NOx	-	-	-

PM-10 PAL

50. The Permittee shall limit stationary source-wide PM-10 emissions to less than 12.8 tons for each rolling 12-month period.

[Condition 47, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Calculation Methodology

51. Calculate average monthly load in accordance with Condition 39.

52. Within 30 calendar days from the start of the first day of a calendar month, the Permittee shall calculate the PM-10 emissions for each emissions unit subject to the PM-10 PAL, for the previous calendar month, using Equation 3 and as follows:

[Conditions 53 & 54, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Equation 3 $$PM-10 = EF \times kWh\left(\frac{1\,ton}{2000\,lb}\right)$$

Where: PM-10 = PM-10 emissions in tons per month for one emissions unit

kWh = A given emissions unit's monthly kilowatt-hours for a given operating mode. The Permittee must use maximum rated capacity for any period of operating time that there is no monitoring data.

EF = Department approved emission factor as described in Conditions 54, 55, 22.1.c, 23, 24, and 26 through 28 for a given emissions unit based on average monthly load and for a given operating mode. The Permittee must use the maximum emission factor for a given emissions unit and operating mode if average monthly load is less than 50 percent. The Permittee, at their discretion, may use the maximum emission factor for a given emissions unit and operating mode for any other emission calculations.

52.1. Sum the monthly PM-10 emissions for each operating mode to obtain the total monthly PM-10 emissions for each emissions unit subject to the PM-10 PAL.

[Condition 54.1, Minor Permit AQ0214MSS02, date]

53. For each month during the PM-10 PAL effective period, add the sum of the previous month's PM-10 emissions from all emissions units subject to the PM-10 PAL to the sum of the preceding 11 months of PM-10 emissions from all emissions units subject to the PM-10 PAL to get the rolling 12-month plantwide PM-10 emissions total. If the PM-10 value calculated exceeds the PM-10 limit contained in Condition 50, the Permittee shall report in accordance with Conditions 37 and 113.

[Condition 55, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Emission Factors

54. Prior to implementing new emission factors under Condition 55.2, use the Department approved PM-10 emission factors contained in Table D to calculate PM-10 emissions under Condition 52.

55. Within 90 days after completing a required re-validation source test under Condition 18 or initial source test under Condition 23, the Permittee shall submit the resulting load- and operating-mode-specific emission factors for Department approval. In addition to the new PM-10 emission factors, the Permittee shall submit updated tables of all currently approved load and operating mode-specific emission factors for all PAL pollutants and indicate the month and year source testing was conducted to produce each set of emission factors. The Permittee shall also submit an updated table indicating the current operating mode configuration (Fuel Efficiency or Low-NOx Mode) for each emission unit.

[Conditions 56 & 57, Minor Permit AQ0214MSS02, date]

[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

55.1. If the Department does not object within 30 days of the Departments receipt of the submittal, then the emission factor will be considered accepted.

55.2. If the emission factor obtained from source testing is accepted, it shall:

[Conditions 57.1 & 57.2, Minor Permit AQ0214MSS02, date]

a. rescind and replace the PM-10 emission factor that is currently in place to demonstrate compliance with the PM-10 PAL;

b. be used by the Permittee to demonstrate compliance with the PM-10 PAL under Condition 52 for the full calendar month of the approval forward; and

c. remain in effect until it is rescinded and replaced by a site specific PM-10 emission factor that is established through source testing.

[Conditions 57.2a-57.2c, Minor Permit AQ0214MSS02, date]

55.3. If the Department rejects the submitted emission factor, the Department will provide to the Permittee its findings and the required actions prior to resubmittal. The Permittee shall continue to use the last Department approved emission factor when performing the calculations under Condition 52, for the monthly compliance demonstration.

[Condition 57.3, Minor Permit AQ0214MSS02, date]

Table D – Department Approved PM-10 & PM-2.5 Emission Factors

EU ID	Operating Mode	PM-10 & PM-2.5 Emission Factor (lb/kW-hr)	Load Range (% of Full Load)	Test Date
10	Fuel Efficiency	0.00014	50	Sep 2017
		0.0001	> 50 and < 75	
		0.00007	75	
		0.0001	> 75 and < 100	
		0.00012	100	
	Low NOx	-	-	-
11, 12, 13	Low NOx	0.00010	50	May 2018
		0.0001	> 50 and < 75	
		0.00005	75	
		0.0001	> 75 and < 100	
		0.00011	100	
14, 15	Fuel Efficiency	0.00011	50	Sep 2017
		0.0001	> 50 and < 75	
		0.00018	75	
		0.0001	> 75 and < 100	
		0.00010	100	
	Low NOx	-	-	-
16	Fuel Efficiency	0.0002	50	May 2020
		0.0002	> 50 and < 67	
		0.0001	67	
		0.0002	> 67 and < 83	
		0.0002	83	
		0.0003	> 83 and < 100	
		0.0003	100	
	Low NOx	-	-	-
17, 18	Fuel Efficiency	0.00040	50	Aug 2019
		0.0004	> 50 and < 67	
		0.00040	67	
		0.0004	> 67 and < 83	
		0.00030	83	
		0.0004	> 83 and < 100	
		0.00050	100	
	Low NOx	-	-	-

SO_2 PAL

56. The Permittee shall limit stationary source-wide SO_2 emissions to less than 67.8 tons for each rolling 12-month period.

57. The Permittee shall calculate the SO_2 emissions using a mass balance in accordance with Condition 58, assuming 100 percent of the fuel oil based sulfur is converted into SO_2.

[Conditions 67 & 68, Minor Permit AQ0214MSS02, date]

[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1) & (3)]

Calculation Methodology

58. The Permittee shall, within 30 calendar days from the start of the first day of a calendar month, calculate the SO_2 emissions for each emissions unit subject to the SO_2 PAL, for the previous calendar month, as follows:

[Condition 70, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

58.1. Convert the sulfur percentage on a weight basis in the fuel to pounds of sulfur dioxide per gallon of fuel using Equation 4.

Equation 4 $$EFSO_2 = \left(\frac{lbSO_2}{Gallon(fuel)}\right) = \left(\frac{wt\%S}{100lb(fuel)}\right) x \left(\frac{7.1lb}{Gallon(fuel)}\right) x \left(\frac{2lbSO_2}{1lbS}\right)$$

Where: wt% S = Sulfur content of the fuel oil on a weight basis obtained by the methods in Condition 63.

58.2. Calculate monthly SO_2 emissions using Equation 5.

Equation 5 $$SO_2 = EFSO_2 \times Gal\left(\frac{1\,ton}{2000\,lb}\right)$$

Where: SO_2 = SO_2 emissions in tons per month
Gal = Gallons of fuel oil burned
$EFSO_2$ = Sulfur dioxide emission factor obtained by Equation 4

59. For each month during the SO_2 PAL effective period, add the previous month's total plantwide SO_2 emissions to the preceding 11 months of total plantwide SO_2 emissions to get the rolling 12-month total. If the SO_2 value calculated exceeds the SO_2 limit contained in Condition 56, the Permittee shall report in accordance with Conditions 37 and 113.

[Condition 71, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Emissions Unit or Related Equipment Addition or Replacement Requirements

60. If the Permittee adds a new emissions unit, replaces an emissions unit, or replaces an emissions unit's generator, the Permittee shall notify the Department of the:

[Condition 72, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

60.1. make, model and size of the replacement emissions unit and of the emissions unit being replaced or of the new emissions unit being added to the stationary source; and

60.2. the make, model and size of the replacement generator and the replaced generator.

[Conditions 72.1 & 72.2, Minor Permit AQ0214MSS02, date]
[40 CFR 71.6(a)(3)]

Monitoring

61. The Permittee shall:

[Condition 73, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

61.1. accurately monitor the fuel oil consumption for all the emissions units subject to the SO_2 PAL by installing flow meters with a minimum accuracy of plus or minus five percent.

61.2. monitor and record the monthly fuel oil consumption for all emissions units contained in Table A, their replacements, and any additional emissions units brought on to the stationary source after the issuance of this permit.

61.3. record the fuel oil consumption on the last day of the calendar month for each month of the effective period of the SO_2 PAL.

61.4. read and record the last fuel oil consumption reading under this SO_2 PAL on the expiration date of the SO_2 PAL.

[Conditions 73.1-73.4, Minor Permit AQ0214MSS02, date]

62. The Permittee shall:

62.1. obtain a statement or receipt from the fuel supplier certifying the maximum sulfur content (by weight) of the fuel oil for each shipment of fuel oil delivered to the stationary source. If a statement or receipt is not available from the supplier, analyze a representative sample of the fuel oil to determine the sulfur content using ASTM method D-129, D 4294, D-1266, D-1522, D-2622, D-4045.

[Condition 74.1, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

63. The Permittee shall, for each new shipment of fuel oil received, calculate the new fuel oil sulfur content for each tank in which the shipment is dispensed using Equation 6.

[Condition 75, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Equation 6 $$wt\ \%\ S_t = \frac{(V_i \times SC_i) + (V_d \times SC_d)}{(V_i + V_d)}$$

Where: $wt\ \%\ S_t$ = Fuel sulfur content of the tank (wt %)
V_i = Initial tank volume (gal)
SC_i = Initial fuel sulfur content in the tank (wt %)
V_d = Volume of delivered fuel (gal)
SC_d = Fuel sulfur content of delivered fuel (wt %)

63.1. A strapping tape and a strapping tank chart appropriate for each tank shall be used to estimate the initial (pre-delivery) volume of fuel oil in each tank.

[Condition 75.1, Minor Permit AQ0214MSS02, date]

64. The fuel oil sulfur content, on a percentage weight basis shall be used to calculate emissions and show compliance with the SO_2 PAL, as described in Condition 57.

[Condition 76, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

65. If the Permittee has no records for the fuel oil sulfur content of the fuel tank and if the Permittee has not received any fuel shipments during the period of time missing data, then the Permittee shall sample the fuel to obtain the sulfur content. The sulfur content shall be determined by using either ASTM method D-129, D 4294, D-1266, D-1522, D-2622, D-4045.

[Condition 77, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

66. The Permittee shall maintain records of the:

[Condition 78, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

66.1. combined monthly and rolling 12-month gallons of fuel oil burned, for the full effective period of the SO_2 PAL plus an additional five calendar years beyond the effective period of this SO_2 PAL;

66.2. monthly and rolling 12-month SO_2 emissions calculated in Condition 58 for five calendar years beyond the effective period of this SO_2 PAL;

66.3. monthly fuel oil sulfur content of all storage tanks supplying fuel to the fuel burning equipment for each month during the effective period of the SO_2 PAL;

66.4. emissions calculations for showing compliance with the SO_2 PAL limit established in Condition 56, the Permittee shall include emissions from startup, shutdown and malfunctions; and

[Conditions 78.1-78.4, Minor Permit AQ0214MSS02, date]

66.5. fuel supplier statements or receipts and/or fuel sampling results required in Condition 62.1 and fuel sampling results required in Condition 65.

[40 CFR 71.6(c)(6)]

67. The Permittee shall report:

[Condition 79, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

67.1. monthly and rolling 12-month gallons of fuel oil burned, in the operating report required by Condition 114;

67.2. monthly and rolling 12-month SO_2 emissions calculated by Condition 58, in the operating report required by Condition 114; and

67.3. monthly fuel sulfur content of the fuel oil being burned, and any updated fuel sulfur content that occurred during the reporting period, in the operating report required by Condition 114.

67.4. any gap in the fuel sulfur monitoring, as a permit deviation per Conditions 37 and 113.

67.5. If there is a gap in the data records maintained by the Permittee for SO_2 emissions or for the sulfur content, the Permittee shall report as a permit deviation per Conditions 37 and 113.

[Conditions 79.1-79.5, Minor Permit AQ0214MSS02, date]

PM-2.5 PAL

68. The Permittee shall limit stationary source-wide PM-2.5 emissions to less than 12.3 tons for each rolling 12-month period.

[Condition 81, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

Calculation Methodology

69. Calculate average monthly load in accordance with Condition 39.

70. Within 30 calendar days from the start of the first day of a calendar month, the Permittee shall calculate the PM-2.5 emissions for each emissions unit subject to the PM-2.5 PAL, for the previous calendar month, using Equation 7 and as follows:

[Conditions 87 & 88, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Equation 7 $$PM - 2.5 = EF \times kWh \left(\frac{1\ ton}{2000\ lb}\right)$$

Where: PM-2.5 = PM-2.5 emissions in tons per month for one emissions unit

kWh = A given emissions unit's monthly kilowatt-hours for a given operating mode. The Permittee must use maximum rated capacity for any period of operating time that there is no monitoring data.

EF = Department approved emission factor as described in Conditions 72, 73, 22.1.c, 23, 24, and 26 through 28 for a given emissions unit based on average monthly load and for a given operating mode. The Permittee must use the maximum emission factor for a given emissions unit and operating mode if average monthly load is less than 50 percent. The Permittee, at their discretion, may use the

maximum emission factor for a given emissions unit and operating mode for any other emission calculations.

70.1. Sum the monthly PM-2.5 emissions for each operating mode to obtain the total monthly PM-2.5 emissions for each emissions unit subject to the PM-2.5 PAL.

[Condition 88.1, Minor Permit AQ0214MSS02, date]

71. For each month

[Condition 89, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

71.1. during the first 12 months of the PM-2.5 PAL effective period, add the sum of the previous month's PM-2.5 emissions from all emissions units subject to the PM-2.5 PAL to the sum of all previous PM-2.5 emissions from all emissions units subject to the PM-2.5 PAL since the effective date to get the plantwide PM-2.5 emissions total. If the PM-2.5 value calculated exceeds the PM-2.5 limit contained in Condition 68, the Permittee shall report in accordance with Conditions 37 and 113.

71.2. after the first 12 months of the PM-2.5 PAL effective period, add the sum of the previous month's PM-2.5 emissions from all emissions units subject to the PM-2.5 PAL to the sum of the preceding 11 months of PM-2.5 emissions from all emissions units subject to the PM-2.5 PAL to get the rolling 12-month plantwide PM-2.5 emissions total. If the PM-2.5 value calculated exceeds the PM-2.5 limit contained in Condition 68, the Permittee shall report in accordance with Conditions 37 and 113.

[Conditions 89.1 & 89.2, Minor Permit AQ0214MSS02, date]

Emission Factors

72. Prior to implementing new emission factors under Condition 73.2, use the Department approved PM-2.5 emission factors contained in Table D to calculate PM-2.5 emissions under Condition 70.

73. Within 90 days after completing a required re-validation source test under Condition 18 or initial source test under Condition 23, the Permittee shall submit the resulting load- and operating-mode-specific emission factors for Department approval. In addition to the new PM-2.5 emission factors, the Permittee shall submit updated tables of all currently approved load and operating mode-specific emission factors for all PAL pollutants and indicate the month and year source testing was conducted to produce each set of emission factors. The Permittee shall also submit an updated table indicating the current operating mode configuration (Fuel Efficiency or Low-NOx Mode) for each emission unit.

[Conditions 90 & 91, Minor Permit AQ0214MSS02, date]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

73.1. If the Department does not object within 30 days of the Departments receipt of the submittal, then the emission factor will be considered accepted.

73.2. If the emission factor obtained from source testing is accepted, it shall:

[Conditions 91.1 & 91.2, Minor Permit AQ0214MSS02, date]

a. rescind and replace the PM-2.5 emission factor that is currently in place to demonstrate compliance with the PM-2.5 PAL;

b. be used by the Permittee to demonstrate compliance with the PM-2.5 PAL under Condition 70 for the full calendar month of the approval forward; and

c. remain in effect until it is rescinded and replaced by a site specific PM-2.5 emission factor that is established through source testing.

[Conditions 91.2a-91.2c, Minor Permit AQ0214MSS02, date]

73.3. If the Department rejects the submitted emission factor, the Department will provide to the Permittee its findings and the required actions prior to resubmittal. The Permittee shall continue to use the last Department approved emission factor when performing the calculations under Condition 70, for the monthly compliance demonstration.

[Condition 92.3, Minor Permit AQ0214MSS02, date]

Insignificant Emissions Units

74. 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:

74.1. **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 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.055(a)(1)]

74.2. **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)]

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

[18 AAC 50.055(c)]

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

a. Submit the compliance certifications of Condition 115 based on reasonable inquiry;

b. Comply with the requirements of Condition 96;

c. Report in the operating report required by Condition 114 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 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 74.1, 74.2, and 74.3.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(b)(4)]
[40 CFR 71.6(a)(1) & (a)(3)]

Section 4. Federal Requirements

40 CFR Part 60 New Source Performance Standards

Subpart A

75. New Source Performance Standards (NSPS) Subpart A Notification. For any affected facility[4] or existing facility[5] regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Administrator written notification or, if acceptable to both the Administrator[6] and the Permittee, electronic notification, as follows:

[18 AAC 50.035 & 50.040(a)(1)]
[40 CFR 60.7(a) & 60.15(d), Subpart A]

75.1. A notification of the date construction (or reconstruction as defined under 40 CFR 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 CFR 60.7(a)(1), Subpart A]

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

[40 CFR 60.15(d), Subpart A]

a. the name and address of owner or operator,

b. the location of the existing facility,

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

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

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

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.

[4] *Affected facility* means, with reference to a stationary source, any apparatus to which a standard applies, as defined in 40 CFR 60.2.

[5] *Existing facility* means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this part, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type, as defined in 40 CFR 60.2.

[6] For Section 4 of this permit, the Department defines *Administrator* to mean the EPA Administrator and the Department.

76. NSPS Subpart A Concealment of Emissions. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Condition 77. 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 CFR 60.12, Subpart A]

Subpart IIII

77. NSPS Subpart IIII Applicability. For EU IDs 14 and 15, comply with the following applicable requirements of NSPS Subpart IIII.

[18 AAC 50.040(a)(2)(OO), 50.040(j)(4), & 50.326(j)]
[40 CFR 71.6(a)(1)]
[40 CFR 60.4200(a), Subpart IIII]

NSPS Subpart IIII Emission Standards

77.1. For each of EU IDs 14 and 15, the Permittee must comply with the following emission standards:

[40 CFR 60.4201(a) & 60.4204(b), Subpart IIII]
[40 CFR 71.6(a)(1)]

a. NMHC + NOx: 6.4 g/kW-hr

b. CO: 3.5 g/kW-hr

c. PM: 0.20 g/kW-hr

[40 CFR 89 Subpart B, Table 1]

77.2. Notwithstanding the requirements in Condition 77.1, the compression ignition (CI) internal combustion engines (ICE) identified in Condition 77.1 may be certified to the provisions of 40 CFR part 94.

[40 CFR 60.4201(f), Subpart IIII]
[40 CFR 71.6(a)(1)]

77.3. Performance tests conducted in-use must meet the not-to-exceed (NTE) standards as indicated in 40 CFR 60.4212.

[40 CFR 60.4204(d), Subpart IIII]
[40 CFR 71.6(a)(3)]

77.4. Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in Condition 77.1 over the entire life of the engine.

[40 CFR 60.4206, Subpart IIII]
[40 CFR 71.6(a)(1)]

NSPS Subpart IIII Compliance Requirements

77.5. You must do all of the following, except as permitted under Condition 77.7:

[40 CFR 60.4211(a), Subpart IIII]
[40 CFR 71.6(a)(1)]

a. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

b. Change only those emission-related settings that are permitted by the manufacturer; and

c. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

[40 CFR 60.4211(a)(1) through (3), Subpart IIII]

77.6. You must comply with the emission standards in Condition 77.1 by purchasing an engine certified to the emission standards in Condition 77.1. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in Condition 77.7.

[40 CFR 60.4211(c), Subpart IIII]
[40 CFR 71.6(a)(1)]

77.7. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

[40 CFR 60.4211(g), Subpart IIII]
[40 CFR 71.6(a)(3)]

a. You must 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. In addition, you must 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. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

[40 CFR 60.4211(g)(3), Subpart IIII]

NSPS Subpart IIII Testing Requirements

77.8. Owners and operators who conduct performance tests pursuant to NSPS Subpart IIII must do so according to paragraphs (a) through (e) of 40 CFR 60.4212.

[40 CFR 60.4212, Subpart IIII]
[40 CFR 71.6(a)(3)]

NSPS Subpart IIII General Requirements

77.9. Table 8 to NSPS Subpart IIII shows which parts of the General Provisions in 40 CFR 60.1 through 60.19 apply to you.

[40 CFR 60.4218, Subpart IIII]
[40 CFR 71.6(a)(1)]

40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants

Subparts A & M

78. Comply with the applicable requirements set forth in 40 CFR 61.145, 61.146, 61.148, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 CFR 61, Subpart A and Appendix A.

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

40 CFR Part 63 National Emission Standards for Hazardous Air Pollutants

Subpart A

79. For EU IDs 10 through 13 and 16 through 18, comply with the applicable requirements of 40 CFR 63 Subpart A in accordance with the provisions for applicability of Subpart A in Subpart ZZZZ, Table 8.

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

Subpart ZZZZ

80. NESHAP Subpart ZZZZ Applicability. For EU IDs 10 through 18, comply with the following applicable requirements of NESHAP Subpart ZZZZ.

[18 AAC 50.040(c)(23), 50.040(j), & 50.326(j)]
[40 CFR 71.6(a)(1)]
[40 CFR 63.6585(c) & 63.6590(a)(1)(iii), Subpart ZZZZ]

80.1. For EU IDs 14 and 15, meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart IIII. No further requirements apply under 40 CFR 63.

[40 CFR 63.6590(c), Subpart ZZZZ]

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

80.2. For EU IDs 10 through 13 and 16 through 18,

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

[40 CFR 63.6603(a) & (b), Subpart ZZZZ]
[40 CFR 71.6(a)(1)]

(i) Change oil and filter every 1,000 hours of operation or annually, whichever comes first;

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

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

[Table 2d, Item 1; NESHAP Subpart ZZZZ]

b. You have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Condition 80.2.a(i). The oil analysis must be performed at the same frequency specified for changing the oil in Condition 80.2.a(i). The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[Table 2d, NESHAP Subpart ZZZZ]

c. You must 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 CFR 63.6625(h) & Table 2d, Subpart ZZZZ]

NESHAP Subpart ZZZZ General Requirements

d. You must be in compliance with the requirements under Condition 80 at all times.

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

[40 CFR 63.6605(a) & (b), Subpart ZZZZ]
[40 CFR 71.6(a)(1)]

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

f. You must demonstrate continuous compliance with each requirement under Conditions 80.2.a through 80.2.c by:

[40 CFR 63.6640(a), Subpart ZZZZ]
[40 CFR 71.6(a)(3)]

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

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

[Table 6, Item 9; NESHAP Subpart ZZZZ]

NESHAP Subpart ZZZZ Reporting Requirements

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

[40 CFR 63.6640(e), Subpart ZZZZ]
[40 CFR 71.6(a)(3)(iii)]

h. You must report all deviations as defined in NESHAP Subpart ZZZZ in the monitoring report required by Condition 114.

[40 CFR 63.6650(f), Subpart ZZZZ]
[40 CFR 71.6(a)(3)(iii)]

NESHAP Subpart ZZZZ Recordkeeping Requirements

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

[40 CFR 63.6655(e), Subpart ZZZZ]
[40 CFR 71.6(a)(3)(ii)]

j. Your records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1).

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

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

[40 CFR 63.6660(a) through (c), Subpart ZZZZ]
[40 CFR 71.6(a)(3)(ii)]

40 CFR Part 82 Protection of Stratospheric Ozone

Subparts F, G, & H

81. Subpart F – Recycling and Emissions Reduction. Comply with the applicable standards for recycling and emission reduction of refrigerants in 40 CFR 82 Subpart F.

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

82. Subpart G – Significant New Alternatives. Comply with the applicable prohibitions in 40 CFR 82.174.

[18 AAC 50.040(d) & 50.326(j)]
[40 CFR 82.174(b) through (d), Subpart G]

83. Subpart H – Halon Emissions Reduction. Comply with the applicable prohibitions in 40 CFR 82.270.

[18 AAC 50.040(d) & 50.326(j)]
[40 CFR 82.270(b) through (f), Subpart H]

NESHAP Applicability Determination Requirements

84. Determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 CFR 63) in accordance with the procedures in 40 CFR 63.1(b).

[18 AAC 50.040(c)(1), 50.040(j), & 50.326(j)]

84.1. An owner or operator of a stationary source who is in the relevant source category and who determines that the source is not subject to a relevant standard or other requirement established under 40 CFR 63 must keep a record as specified in 40 CFR 63.10(b)(3).

[40 CFR 71.6(a)(3)(ii)]
[40 CFR 63.1(b)(3), Subpart A]

85. If an existing source becomes affected by an applicable subpart of 40 CFR 63, the Permittee shall comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 CFR 63.6(c).

[18 AAC 50.040(c)(1), 50.040(j), & 50.326(j)]

86. After the effective date of any relevant standard promulgated by the Administrator under 40 CFR 63, 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 CFR 63.9(b).

[18 AAC 50.040(c)(1), 50.040(j), & 50.326(j)]
[40 CFR 71.6(a)(3)(iii)]
[40 CFR 63.5(b)(4), Subpart A]

Section 5. General Conditions

Standard Terms and Conditions

87. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

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

88. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

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

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

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

90. 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 through 403.

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

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

91.1. potential to emit of 651 tpy; or

91.2. 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)(3), 50.035, 50.326(j)(1), 50.346(b)(1), 50.410, & 50.420]
[40 CFR 71.5(c)(3)(ii)]

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

92.1. 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 91.2. 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/.

92.2. 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.

92.3. If the stationary source has not commenced construction or operation on or before March 31st, the Permittee may submit to the Department's Anchorage office a waiver letter certified under 18 AAC 50.205 that states the stationary source's actual annual emissions for the previous calendar year are zero tpy and provides estimates for when construction or operation will commence.

92.4. If no estimate or waiver 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 91.1.

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

93. 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)]

94. 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.

94.1. 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 94.1.a or to address the results of Department inspections that found potential problems; and

(ii) to prevent future dust problems.

94.2. The Permittee shall report according to Condition 96.

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

95. 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)]

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

[18 AAC 50.110, 50.040(e), 50.326(j)(3) & 50.346(a)]
[40 CFR 71.6(a)(3)]

96.1. **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 96.

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 96; or

(ii) the Department notifies the Permittee that it has found a violation of Condition 96.

96.2. **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 96; and

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

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

a. With each stationary source operating report under Condition 114, 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 113.

97. Technology-Based Emission Standard. If an unavoidable emergency, malfunction (as defined in 18 AAC 50.235(d)), or non-routine repair (as defined in 18 AAC 50.990(64)), causes emissions in excess of a technology-based emission standard[7] listed in Condition 13, 77, or 81 (refrigerants),

97.1. take all reasonable steps to minimize levels of emissions that exceed the standard, and

97.2. report in accordance with Condition 113; 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 CFR 71.6(c)(6)]

Open Burning Requirements

98. Open Burning. If open burning is conducted at this stationary source, comply with the requirements of 18 AAC 50.065.

98.1. Keep written records to demonstrate compliance with the limitations in this condition and the requirements of 18 AAC 50.065. Submit copies of the records to the Department upon request.

98.2. Include this condition in the annual certification required under Condition 115.

[18 AAC 50.065, 50.040(j), & 50.326(j)]
[40 CFR 71.6(a)(3)]

[7] 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 CFR 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

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

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

100. Operating Conditions. Unless otherwise specified by an applicable requirement or test method, conduct source testing

[18 AAC 50.220(b)]

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

100.2. 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.

101. Reference Test Methods. Use the following test methods when conducting source testing for compliance with this permit:

101.1. 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 CFR 60.

[18 AAC 50.220(c)(1)(A) & 50.040(a)]
[40 CFR 60]

101.2. 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 CFR 61.

[18 AAC 50.040(b) & 50.220(c)(1)(B)]
[40 CFR 61]

101.3. 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 CFR 63.

[18 AAC 50.040(c) & 50.220(c)(1)(C)]
[40 CFR 63]

101.4. 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 & 50.220(c)(1)(D)]

101.5. 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 CFR 60, Appendix A.

[18 AAC 50.040(a)(3) & 50.220(c)(1)(E)]
[40 CFR 60, Appendix A]

101.6. Source testing for emissions of PM-2.5 and PM-10 must be conducted in accordance with the procedures specified in 40 CFR 51, Appendix M, Methods 201 or 201A and 202. For testing required for the PM-2.5 and PM-10 PALs, the Permittee may conduct source testing in accordance with the procedures at 40 CFR 60, Appendix A, Method 5 and 40 CFR 51, Appendix M, Method 202 if conditions for testing under 40 CFR 51, Appendix M, Methods 201 and 201A cannot be met.

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

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

[18 AAC 50.040(c)(32) & 50.220(c)(2)]
[40 CFR 63, Appendix A, Method 301]

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

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

103. Test Exemption. Compliance with Conditions 105, 106 and 107 is not required for Method 9 Plan (Condition 2.3) or Smoke/No Smoke Plan (Condition 2.4) observations.

[18 AAC 50.345(a)]

104. 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)]

105. Test Plans. Except as provided in Condition 103, 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 99 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)]

106. Test Notification. Except as provided in Condition 103, 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)]

107. Test Reports. Except as provided in Condition 103, 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 110. 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)]

108. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in Conditions 5 and 74.2, 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

109. Keep all records required by this permit for at least five years after the date of collection, including:

[18 AAC 50.040(a)(1) & 50.326(j)]
[40 CFR 60.7(f), Subpart A, 40 CFR 71.6(a)(3)(ii)(B)]

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

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

a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;

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

c. the date(s) analyses were performed;

d. the company or entity that performed the analyses;

e. the analytical techniques or methods used;

f. the results of such analyses; and,

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

Reporting Requirements

110. 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.

110.1. 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)]

111. 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.

111.1. 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)]

112. 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)]

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

113.1. **Excess Emissions Reporting**.Except as provided in Condition 96, 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 113.1.d.

d. Report all other excess emissions not described in Conditions 113.1.a, 113.1.b, and 113.1.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 114 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 an excess emissions report.

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

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

a. Report according to the required deadline for failure to monitor, as specified in other applicable conditions of this permit (Conditions 4.3.b and 8.4.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 114 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)]

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

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

114. Operating Reports. During the life of this permit[8], the Permittee shall submit to the Department an operating report in accordance with Conditions 110 and 111 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.

114.1. 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.

114.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 114.1, the Permittee shall identify

a. the date of the excess emissions or permit deviation;

b. the equipment involved;

c. the permit condition affected;

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

[8] *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.

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

114.3. when excess emissions or permit deviations have already been reported under Condition 113 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.

114.4. The operating report must include, for the period covered by the report, a listing of emissions monitored under Conditions 2.3.e, 2.4.c, and 6.2 which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report.

a. the date of the emissions;

b. the equipment involved;

c. the permit condition affected; and

d. the monitoring result which triggered the additional monitoring.

114.5. **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 CFR 71.6(a)(3)(iii)(A)]

115. Annual Compliance Certification. Each year by March 31, compile and submit to the Department an annual compliance certification report according to Condition 111.

115.1. 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;

115.2. **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.

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

[18 AAC 50.205, 50.345(a) & (j), & 50.326(j)]
[40 CFR 71.6(c)(5)]

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

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

a. 250 tpy of NH_3, PM_{10}, $PM_{2.5}$ or VOC; or

b. 2,500 tpy of CO, NOx or SO_2.

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

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

(i) 0.5 tpy of actual Pb, or

(ii) 1,000 tpy of CO; or

(iii) 100 tpy of SO_2, NH_3, PM_{10}, $PM_{2.5}$, NOx or VOC.

b. For stationary sources located in Nonattainment Areas:

(i) 0.5 tpy of actual Pb, or

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

(iii) 100 tpy of SO_2, NH_3, PM_{10}, $PM_{2.5}$, NOx, or VOC; or as specified in Conditions 100.2.b(iv) through 100.2.b(viii):

(iv) 70 tpy of SO_2, NH_3, $PM_{2.5}$, NOx, or VOC in $PM_{2.5}$ serious nonattainment; or

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

(vi) 50 tpy of NOx or VOC in O_3 serious nonattainment areas; or

(vii) 25 tpy of NOx or VOC in O_3 severe nonattainment areas; or

(viii) 10 tpy of NOx or VOC in O_3 extreme nonattainment areas.

116.3. For reporting under Condition 116.2, the Permittee shall report the annual emissions and the required data elements under Condition 116.4 every third year for the previous calendar year as scheduled by the EPA.[9]

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

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

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

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

117.1. **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 114 for the period covered by the report, a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10. 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 reports submitted during the reporting period.

[18 AAC 50.326(j)(4) & 50.040(j)]
[40 CFR 71.6(c)(6)]

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

[18 AAC 50.326(j)(4) & 50.040(j)]
[40 CFR 71.6(c)(6)]

[9] The calendar years for which reports are required are based on the triennial reporting schedule in 40 CFR 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.).

Section 8. Permit Changes and Renewal

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

118.1. 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;

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

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

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

[18 AAC 50.040(j)(7), 50.326(a) & 50.346(b)(7)]
[40 CFR 71.10(d)(1)]

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

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 CFR 71.6(a)(8)]

120. Off Permit Changes. Changes that are not addressed or prohibited by this permit, other than those subject to the requirements of 40 CFR Part 72 through 78 or those that are modifications under any provision of Title I of the Act, may be made without a permit revision, provided that the following requirements are met:

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

120.2. 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;

120.3. The change shall not qualify for the shield under 40 CFR 71.6(f);

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

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 CFR 71.6(a)(12)]

121. Operational Flexibility. CAA Section 502(b)(10)[10] changes may be made within the permitted stationary source without 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): Provided, that the Permittee provides EPA and the Department with written notification no less than seven days in advance of the proposed change.

121.1. For each such change, the notification required by Condition 121 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.

121.2. The permit shield described in 40 CFR 71.6(f) shall not apply to any change made pursuant to Condition 121.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 CFR 71.6(a)(13)]

122. Permit Renewal. To renew this permit, the Permittee shall submit to the Department[11] an application under 18 AAC 50.326 no sooner than [18 months before] and no later than [6 months before the expiration date of this permit]. The renewal application must 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 CFR 71.7(b) and 71.5(a)(1)(iii).

[18 AAC 50.040(j)(3), 50.326(c) & (j)(2)]
[40 CFR 71.5(a)(1)(iii) & 71.7(b) & (c)(1)(ii)]

[10] As defined in 40 CFR 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.

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

Section 9. Compliance Requirements

General Compliance Requirements

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

123.1. included and specifically identified in the permit; or

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

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

124. 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

124.1. an enforcement action;

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

124.3. denial of an operating permit renewal application.

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

125. 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) & 50.326(j)]
[40 CFR 71.6(c)(3) & 71.5(c)(8)(iii)(A)]

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

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

127. 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

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

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

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

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

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

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

[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(c)(3) & 71.5(c)(8)(iii)(B)]

Section 10. Permit As Shield from Inapplicable Requirements

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

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

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

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

[18 AAC 50.326(j)]
[40 CFR 71.6(f)(3)(i) & (ii)]

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

[18 AAC 50.326(j)]
[40 CFR 71.6(f)(1)(ii)]

Table E - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
10 through 13 and 16 through 18	NSPS Subpart IIII	Emission unit was constructed prior to the applicability date of July 11, 2005.
10 through 18	NSPS Subpart JJJJ	Emission unit is not a spark ignition engine.

[18 AAC 50.326(j)]
[40 CFR 71.6(f)(1)(ii)]

Section 11. 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 at 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, or "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.
- Organization: observer's employer.
- Certified By, Date: name of "smoke school" certifying observer and date of most recent certification.

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

Page No.____________

Stationary Source Name | Type of Emission Unit

Emission Unit Location

City | State | Zip

Phone # (Key Contact) | Stationary Source ID Number

Process Equipment | Operating Mode

Control Equipment | Operating Mode

Describe Emission Point/Location

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

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

Describe Emissions & Color: Start | End

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

Point in Plume at Which Opacity Was Determined

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

Sky Conditions: Start | End

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

Ambient Temperature | Wet Bulb Temp | RH percent

SOURCE LAYOUT SKETCH: 1 Stack or Point Being Read 2 Wind Direction From 3 Observer Location 4 Sun Location 5 North Arrow 6 Other Stacks

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

Range of Opacity
Minimum | Maximum

I have received a copy of these opacity observations
Print Name:
Signature:
Title | Date

Print Observer's Name
Observer's Signature | Date
Observer's Affiliation:
Certifying Organization
Certified By: | Date

Data Reduction:

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

Average Opacity Summary:

Set Number	Time			Opacity		Comments
	Start	End		Sum	Average	

Section 12. SO_2 Material Balance Calculation

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

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

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

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

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

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

F. = 20.9 – [**vol%$_{dry}O_{2,\ exhaust}$**] = 20.9 – _____ = _____

G. = [**vol%$_{dry}O_{2,\ exhaust}$**] ÷ F = _____ ÷ _____ = _____

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

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

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

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

The fuel weight percent (wt%) of sulfur is obtained pursuant to Condition 10. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (**vol%$_{dry}O_{2,\ exhaust}$**) is obtained from oxygen meters, manufacturer's data, or from the most recent analysis under 40 CFR 60, Appendix A-2, Method 3, adopted by reference in 18 AAC 50.040(a), at the same engine load used in the calculation.

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

[18 AAC 50.346(c)]

Section 13. ADEC Notification Form[12]

Dillingham Power Plant — **Stationary Source (Facility) Name**

AQ0214TVP04 — **Air Quality Permit Number.**

Nushagak Cooperative, Inc.

Company Name

When did you discover the Excess Emissions/Permit Deviation?

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

When did the event/deviation occur?

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

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

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

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

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

☐ Excess Emissions - Complete Section 1 and Certify

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

☐ Deviation from Permit Conditions - Complete Section 2 and Certify

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

☐ Deviation from COBC[13], CO[14], or Settlement Agreement - Complete Section 2 and Certify

[12] Revised as of November 7, 2020.

[13] Compliance Order By Consent

[14] Compliance Order

Section 1. Excess Emissions

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

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

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

(c) **Description**

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

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

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

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

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

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

(f) **Corrective Actions:**

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

(g) **Unavoidable Emissions:**

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

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

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

Section 2. Permit Deviations

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

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

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

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

EU ID	EU Name	Permit Condition /Potential Deviation

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

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

(d) **Corrective Actions:**

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

Certification:

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

Printed Name:_____Title_____Date _____

Signature:_____ Phone number_____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j). Read and sign the certification in the bottom of the form above. (See Condition 110.)*

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

If submitted online, report must be submitted by an authorized E-signer for the stationary source (according to Condition 110).

[18 AAC 50.346(b)(3)]