DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY OPERATING PERMIT

Permit No. AQ0215TVP04 Issue Date: September 14, 2018
Revision 1 Draft: April 10, 2020 Expiration Date: September 14, 2023

The Alaska Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **City of Unalaska, Department of Public Utilities**, for the operation of the **Dutch Harbor Power Plant (DHPP)**.

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.

Upon effective date of this permit, Operating Permit AQ0215TVP03, including all revisions, expires.

This operating permit became effective October 14, 2018.

Revision 1 becomes effective <insert date—30 days after Revision 1 issue date>.

James R. Plosay, Manager
Air Permits Program

Table of Contents

Abbreviations and Acronyms

AAAQS ..... Alaska Ambient Air Quality Standard
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
CO ..... carbon monoxide
DHPP..... Dutch Harbor Power Plant
dscf ..... dry standard cubic foot
EPA ..... US Environmental Protection Agency
EU..... emissions unit
FITR ..... fuel injection timing retard
g/kW-hr..... grams per kilowatt-hour
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
ID..... emissions unit identification number
kPa..... kiloPascals
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
MWh ..... megawatt-hour
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
NO_X ..... 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
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:		City of Unalaska, Department of Public Utilities PO Box 610 Unalaska, AK 99685
Stationary Source Name:		Dutch Harbor Power Plant
Location:		53º 53´ 18.6" North; 166º 32´ 14.28" West
Physical Address:		1732 East Point Road Dutch Harbor, Alaska 99685
Owner and Operator:		City of Unalaska, Department of Public Utilities PO Box 610 Unalaska, AK 99685
Permittee's Responsible Official:		Thomas Thomas, City Manager PO Box 610 Unalaska, AK 99685
Designated Agent:		Dan Winters, Director of Public Utilities PO Box 610 Unalaska, AK 99685
Stationary Source and Building Contact:		Andy McCracken, Powerhouse Supervisor PO Box 610 Unalaska, AK 99685 (907) 581-1831
Fee and Permit Contact:		Dan Winters, Director of Public Utilities PO Box 610 Unalaska, AK 99685 (907) 581-1260
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. Except as noted elsewhere in the permit, emissions unit descriptions and ratings are given for identification purposes only.

Table A - Emissions Unit Inventory

EU ID	Emissions Unit Name	Emissions Unit Description	Fuel	Rating/Size	Installation Date
7	Genset #8	Caterpillar 3516	Diesel	1,180 kWe	1989
8	Genset #9	Caterpillar 3512B	Diesel	1,230 kWe	1994
13	Genset #10	Wärtsilä 12V32C	Diesel	5,211 kWe	2010
14	Genset #11	Wärtsilä 12V32C	Diesel	5,211 kWe	2010
15	Genset #13	Caterpillar C-280	Diesel	4,400 kWe	2011
16	Genset #12	Caterpillar C-280	Diesel	4,400 kWe	2015
17	Genset #15	Caterpillar C-9 DITA	Diesel	250 kWe	2010

[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 7, 8, and 13 through 17 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 7, 8, and 13 through 17, 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)]

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

Liquid Fuel-Fired Emissions Units

2. Visible Emissions Monitoring. When required by Condition 1.1, or in the event of replacement during the permit term, the Permittee shall observe the exhaust of EU IDs 7, 8, and 13 through 17 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 visible emissions plans 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 in effect from the previous permit at the time a renewed permit is issued, if applicable.

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

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

a. **First Method 9 Observation**. Except as provided in Condition 2.2 and 2.3.a(iii), observe exhaust for 18 minutes within six months after the issue date of this permit.

(i) For any unit, observe exhaust for 18 minutes within 14 calendar days after changing from the Smoke/No-Smoke Plan of Condition 2.4.

(ii) For any unit replaced during the term of this permit, observe exhaust for 18 minutes within 30 days of startup.

(iii) For EU IDs 7 and 8, observe the exhaust within 30 days of the emissions unit becoming fully operational[1] following restart.

(A) Record the restart dates of EU IDs 7 and 8.

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

c. **Semiannual Method 9 Observations**. After observing emissions for three consecutive operating months under Condition 2.3.b, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, perform 18-minute observations:

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

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

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

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

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

e. **Increased Method 9 Frequency**. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that emissions unit to at least monthly intervals as described in Condition 2.3.b, until the criteria in Condition 2.3.c for semiannual monitoring are met.

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

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

[1] Fully operational, for purposes of this permit and as it applies to EU IDs 7 & 8, is defined as completing all testing requirements after unit is restarted. Testing requirements shall not exceed 60 days after unit is restarted.

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

c. **Smoke Observed**. If smoke is observed, either begin the Method 9 Plan of Condition 2.3 or perform the corrective action required under Condition 2.5.

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

a. initiate actions to eliminate smoke 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 smoke; and

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

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

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

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

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

3. Visible Emissions Recordkeeping. When required by Condition 1.1, or in the event of replacement of any EU IDs 7, 8, and 13 through 17 during the permit term, the Permittee shall keep records as follows:

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

3.1. If using the Method 9 Plan of Condition 2.3,

a. the observer shall record

(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 mode (load or fuel consumption rate or best estimate if unknown) on the sheet at the time opacity observations are initiated and completed;

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

(iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emission Observation Form in Section 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, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet.

c. Calculate and record the highest six-minute 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. from Table A, the ID of the emissions unit observed;

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

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

e. if the 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).

4. Visible Emissions Reporting. When required by Condition 1.1, or in the event of replacement of any of EU IDs 7, 8, and 13 through 17 during the permit term, the Permittee shall report visible emissions as follows:

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

4.1. Include in each operating report required under Condition 64:

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 each emissions unit under the Method 9 Plan,

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

(ii) a summary to include:

(A) number of days observations were made;

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

(C) dates when one or more observed six-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 smoke was observed; and

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

4.2. Report under Condition 63:

a. the results of Method 9 observations that exceed 20 percent average opacity for any six-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.

Particulate Matter Emissions Standard

5. Industrial Process and Fuel-Burning Equipment Particulate Matter. The Permittee shall not cause or allow particulate matter emitted from EU IDs 7, 8, and 13 through 17 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 7, 8, and 13 through 17, monitor, record and report in accordance with Conditions 6 through 7.

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

Particulate Matter MR&R

Liquid Fuel-Fired Emissions Units

6. Particulate Matter Monitoring for Diesel Engines. The Permittee shall conduct source tests on diesel engines, EU IDs 7, 8, and 13 through 17, 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. Except as allowed in Condition 6.4, within six months of exceeding the criteria of Conditions 6.2.a or 6.2.b, either

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

b. make repairs so that emissions no longer exceed the criteria of Condition 6.2; to show that emissions are below those criteria, observe emissions as described in Condition 2.3 under load conditions comparable to those when the criteria were exceeded.

6.2. Conduct the test or make repairs according to Condition 6.1 if

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

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

6.3. During each one-hour particulate matter source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the 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 automatic particulate matter source test requirements in Conditions 6.1 and 6.2 are waived for an emissions unit if a particulate matter source test on that unit has shown compliance with the particulate matter standard during this permit term.

7. Particulate Matter Reporting for Diesel Engines. The Permittee shall report as follows:

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

7.1. Report under Condition 63:

a. the results of any particulate matter source test that exceeds the particulate matter emissions limit; or

b. if one of the criteria of Condition 6.2 was exceeded and the Permittee did not comply with either Condition 6.1.a or 6.1.b, this must be reported by the day following the day compliance with Condition 6.1 was required;

7.2. report observations in excess of the threshold of Condition 6.2.b within 30 days of the end of the month in which the observations occur;

7.3. in each operating report under Condition 64, include:

a. the dates, EU ID(s), and results when an observed 18-minute average was greater than an applicable threshold in Condition 6.2;

b. a summary of the results of any particulate matter testing under Condition 6; and

c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of Condition 6.2, if they were not already submitted.

Sulfur Compound Emissions Standard

8. Sulfur Compound Emissions. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from EU IDs 7, 8, and 13 through 17 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[2]

9. Sulfur Compound Monitoring and Recordkeeping. The Permittee shall comply with the following:

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

a. If the fuel grade requires a sulfur content less than 0.5 percent by weight, keep receipts that specify fuel grade and amount; or

b. If the fuel grade does not require a sulfur content less than 0.5 percent by weight, keep receipts that specify fuel grade and amount and

(i) test the fuel for sulfur content; or

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

[2] *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.

9.2. Fuel testing under Condition 9.1 must follow an appropriate method listed in 18 AAC 50.035(b)-(c) or 40 CFR 60.17 incorporated by reference in 18 AAC 50.040(a)(1).

9.3. 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).

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

10.1. If SO_2 emissions calculated under Condition 9.3 exceed 500 ppm, the Permittee shall report under Condition 63. When reporting under this condition, include the calculation under Section 12 or Method 19.

10.2. The Permittee shall include in the report required by Condition 64

a. a list of the fuel grades received at the stationary source during the reporting period;

b. for any grade with a maximum fuel sulfur greater than 0.5 percent sulfur, the fuel sulfur of each shipment; and

c. for fuel with a sulfur content greater than 0.75 percent, the calculated SO_2 emissions in ppm.

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

11. Used Oil. The Permittee may burn used oil in the engines only as follows:

11.1. When burning used oil, blend oil into the fuel system consistent with the DHPP Used Oil and Fuel Blending Log to keep the used oil ratio under 0.8%.

11.2. In the operating report required by Condition 64, include copies of the blending logs noting the used oil added and fuel oil added to produce the desired used oil ratio of less than 0.8%.

11.3. Report in accordance with Condition 63 any time the blend ratio deviates from Condition 11.1.

11.4. Whenever used oil is added to liquid fuel, the Permittee shall comply with Condition 19.1.

[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1), 71.6(a)(3), & 71.6(c)(6)]

Preconstruction Permit [3] Requirements

12. Stack Requirements. For EU IDs 13, 14, 15, and 17 construct stacks with:

[Condition 5, Construction Permit AQ0215CPT02, Rev 1, 7/20/2010]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

12.1. sampling ports that comport with 40 CFR 60, Appendix A, Method 1, Section 2.1, and stack or duct free of cyclonic flow at the port location during the applicable test methods and procedures;

12.2. safe access to sampling ports; and

12.3. utilities for emission sampling and testing equipment.

[Conditions 5.a through 5.c, Construction Permit AQ0215CPT02, Rev 1, 7/20/2010]
[40 CFR 71.6(a)(1)]

Best Available Control Technology (BACT) Requirements

13. NOx BACT Limit for Units 13 and 14. Limit the NOx emission rate, expressed as NO_2 averaged over three hours, from each of EU IDs 13 and 14 to no greater than 13.6 g/kW-hr at all times. Monitor, record, and report as follows:

[Condition 17, Construction Permit AQ0215CPT02, Rev 1, 7/20/2010]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

13.1. Operate each unit with Fuel Injection Timing Retard (FITR) and with an aftercooler with a separate low temperature cooling water circuit.

13.2. After every engine re-configuration of EU IDs 13 and 14, conduct NOx source tests to ascertain compliance with the NOx emission rate limit in this condition. (Conduct the test on the reconfigured engine.) Conduct the test at 100 percent load. Determine the emission rate in g/kW-hr expressed as NO_2, using exhaust properties determined by Reference Method 19 and exhaust gas measurements as set out in Section 6.

13.3. If any NOx source test results in a NOx emission rate greater than the limit in this condition, report as excess emissions under Condition 63.

[Conditions 17.1, 17.3, 17.4, Construction Permit AQ0215CPT02, Rev 1, 7/20/2010]
[40 CFR 71.6(a)(3)]

14. NOx BACT Limit for EU ID 17. Limit the NOx emission rate, expressed as NO_2 averaged over three hours, from EU ID 17 to no greater than 5.75 g/kW-hr at all times.

[Condition 18.6, Construction Permit AQ0215CPT02, Rev 1, 7/20/2010]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

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

14.1. Comply with Condition 28.7.

[40 CFR 71.6(a)(3) & 71.6(c)(6)]

15. BACT Limits for EU ID 15. The Permittee shall limit the emissions from EU ID 15 to the values shown below in Table B. The Permittee shall implement the BACT controls on EU ID 15 listed in Table B.

[Conditions 20 & 20.1, Minor Permit AQ0215MSS03, 11/28/2012]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

Table B – BACT Limits and Controls for EU ID 15

Pollutant	BACT Control	BACT Emission Limit
NOx	Turbocharger/Aftercooler	9.8 g/kW-hr
PM-2.5	Positive Crankcase Ventilation	0.50 g/kW-hr

15.1. To show compliance with the NOx BACT limit, the Permittee shall comply with the requirements in NSPS Subpart IIII set forth in Conditions 28.7 and 28.10.

[Conditions 20.2 & 20.2b, Minor Permit AQ0215MSS03, 11/28/2012]
[40 CFR 71.6(a)(3)]

15.2. To show compliance with the PM-2.5 BACT limit, the Permittee shall comply with the requirements in NSPS Subpart IIII set forth in Conditions 28.7 and 28.10.

[Conditions 20.3 & 20.3b, Minor Permit AQ0215MSS03, 11/28/2012]
[40 CFR 71.6(a)(3)]

Ambient Air Quality Protection Requirements

16. To protect the annual NO_2 Alaska Ambient Air Quality Standard (AAAQS) and increment; the 24-hour and annual PM-2.5 AAAQS; the 24-hour and annual PM-10 increment; the 1-hour, 3-hour, 24-hour, and annual SO_2 AAAQS and the 3-hour, 24-hour, and annual SO_2 increment, the Permittee shall:

[Condition 15, Minor Permit AQ0215MSS03, 11/28/2012]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

16.1. For each exhaust stack that is installed and operated on EU IDs 7, 8, 13 through 15 and 17, construct the exhaust stack to have a release point that equals or exceeds an above grade height of the values listed in Table C.

[Condition 15.1, Minor Permit AQ0215MSS03, 11/28/2012]

Table C – Emission Unit Stack Heights

EU ID	Description	Stack Height (m)
7	Caterpillar 3516	25.6
8	Caterpillar 3512B	25.6
13	Wärtsilä 12V32C	26.2
14	Wärtsilä 12V32C	26.2
15	Caterpillar C-280	25.6
17	Caterpillar C-9 DITA	3.66

17. The Permittee shall protect the 1-hour, 3-hour, 24-hour and annual SO_2 AAAQS by complying with the following:

17.1. Construct and maintain EU ID 16 with the minimum stack height of 25.4 meters above grade.

17.2. Construct and maintain EU ID 16 with an uncapped, vertical release. 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.

17.3. Burn diesel fuel with a sulfur content of no greater than 0.01 percent by weight (wt%) in EU ID 16.

[Condition 7, Minor Permit AQ0215MSS05, MM/DD/2020]

a. Monitor, record, and report in accordance with Conditions 19.1.a through 19.1.e and 19.1.g.

b. If the fuel sulfur content combusted in EU ID 16 exceeds 0.01 wt%, report in accordance with Condition 63.

[40 CFR 71.6(a)(3) & 71.6(c)(6)]

18. To protect the annual NO_2 increment, the Permittee shall operate EU ID 17 no more than 100 hours per rolling 12-month period.

[Conditions 16 & 16.1, Minor Permit AQ0215MSS03, 11/28/2012]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

18.1. Install on EU ID 17 a non-resettable hour meter.

18.2. Monitor and record the hours of operation of EU ID 17.

18.3. Before the end of each calendar month calculate and record the total hours of operation for EU ID 17 for the previous month, then calculate the rolling 12-month total hours of operation by adding the previous 11 months.

18.4. Report the monthly and rolling 12-month hours of operation for each month in the operating report required in Condition 64.

18.5. Report in accordance with Condition 63 if the consecutive 12-month operating hours exceed the limit in Condition 18.

[Conditions 16.1a through 16.1e, Minor Permit AQ0215MSS03, 11/28/2012]
[40 CFR 71.6(a)(3)]

19. To protect the 1-hour, 3-hour, 24-hour, and annual SO_2 AAAQS and the 3-hour, 24-hour, and annual SO_2 increment, the Permittee shall burn diesel fuel with a sulfur content of no greater than 0.01 wt%S (100 ppm) in EU IDs 7, 8, 13 through 15 and 17.

[Conditions 17 & 17.1, Minor Permit AQ0215MSS03, 11/28/2012]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

19.1. Monitor, record, and report as follows:

[Condition 17.1a, Minor Permit AQ0215MSS03, 11/28/2012]
[40 CFR 71.6(a)(3)]

a. Obtain a statement or receipt from the fuel supplier certifying the maximum sulfur content of the fuel for each shipment of fuel delivered to DHPP. If a certified statement or receipt is not available from the supplier, analyze a representative sample of any fuel added to any tank in accordance with Condition 19.1.b.

[Condition 17.1a(i), Minor Permit AQ0215MSS03, 11/28/2012]

b. If required under this permit to determine the sulfur content of fuel oil, analyze fuel sulfur content in accordance with Condition 9.2.

[Condition 17.1a(ii), Minor Permit AQ0215MSS03, 11/28/2012]

c. Except as indicated in Condition 19.1.d, calculate and record the sulfur content, by weight, of the fuel in each tank, after each time fuel is added to a tank, using Equation 1.

[Condition 17.1a(iv), Minor Permit AQ0215MSS03, 11/28/2012]

Equation 1

$$S_T = \frac{(Q_D \times S_D)+(Q_{BD} \times S_{BD})}{Q_T}$$

Where:

Q_D = quantity of delivered fuel, pounds
S_D = sulfur content of delivered fuel, percent sulfur by weight (wt%S)
Q_{BD} = quantity of fuel in tank before delivery, pounds
S_{BD} = sulfur content of fuel in tank before delivery, percent sulfur by weight
S_T = sulfur content of blended fuel in the tank, percent sulfur by weight (will be S_{BD} for next calculation)
Q_T = total quantity of fuel in tank (Q_D + Q_{BD}), pounds

d. If the fuel sulfur content in a given tank (S_{BD}) is less than 0.01 wt%S and the sulfur content of a given fuel oil delivery is less than 0.01 wt%S, then the Permittee may forego fuel sulfur content calculations in Condition 19.1.c for that delivery. If the Permittee foregoes fuel sulfur content calculations for a delivery, then for the next fuel delivery for which the fuel sulfur content is greater than 0.01 wt%S, the Permittee shall either

[Condition 17.1a(v), Minor Permit AQ0215MSS03, 11/28/2012]

(i) assume the fuel sulfur content of the fuel in the tank is 0.01 wt%S; or

(ii) test the fuel sulfur content of the fuel in the tank in accordance with Condition 19.1.b.

[Conditions 17.1a(v)(A) & 17.1a(v)(B), Minor Permit AQ0215MSS03, 11/28/2012]

e. Keep records of statements or receipts from the fuel supplier showing sulfur content and quantity of each shipment of fuel under Condition 19.1.a, results of each sulfur measurement required under Condition 19.1.a, and each fuel sulfur calculation conducted under Condition 19.1.c.

f. If the fuel sulfur content combusted in any of EU IDs 7, 8, 13 through 15 and 17 exceeds 0.01 wt%S, report in accordance with Condition 63.

[Conditions 17.1a(vi) & 17.1a(vii), Minor Permit AQ0215MSS03, 11/28/2012]

g. Include copies of the records required by Condition 19.1.e in the operating report required in Condition 64.

[40 CFR 71.6(c)(6)]

20. To protect the 24-hour PM-10 increment and 24-hour PM-2.5 AAAQS, the Permittee shall operate EU ID 17 only 12 hours or less in any rolling 24-hour period.

[Conditions 18 & 18.1, Minor Permit AQ0215MSS03, 11/28/2012]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

20.1. Record the start and stop times and dates for EU ID 17.

[40 CFR 71.6(a)(3) & 71.6(c)(6)]

20.2. Calculate and record the hours of operation of EU ID 17 for each consecutive 24-hour period.

[40 CFR 71.6(a)(3) & 71.6(c)(6)]

20.3. Include the information in Conditions 20.1 and 20.2 in the operating report required in Condition 64.

[Conditions 18.1a & 18.1b, Minor Permit AQ0215MSS03, 11/28/2012]
[40 CFR 71.6(a)(3) & 71.6(c)(6)]

20.4. Report in accordance with Condition 63 if EU ID 17 is operated for more than 12 hours in any rolling 24-hour period.

[Condition 18.1c, Minor Permit AQ0215MSS03, 11/28/2012]
[40 CFR 71.6(a)(3)]

Owner Requested Limits (ORLs)

21. ORL to Avoid PSD Review for SO_2 and VOCs. The Permittee shall limit emissions of VOCs to no more than 51.2 tons per year and emissions of SO_2 to no more than 46.8 tons per year by complying with the following:

[Condition 22, Minor Permit AQ0215MSS03, 11/28/2012]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

21.1. Comply with Condition 19.

[Condition 22.2, Minor Permit AQ0215MSS03, 11/28/2012]

21.2. The Permittee shall calculate and report actual VOC and SO_2 emissions as follows:

a. Maintain a dedicated fuel meter on each of EU IDs 7, 8, and 13 through 15.

(i) Monitor and record the monthly fuel usage for each of EU IDs 7, 8, and 13 through 15.

b. Before the end of each calendar month, calculate and record the combined VOC emissions from EU IDs 7, 8, and 13 through 15 for the previous month, using Equation 1 and fuel use records from Condition 21.2.a(i), Equation 2 and power production records from Condition 22.1.a, and VOC emission factors in Table D or more recent emission factors from a Department accepted source test.

Equation 1

$$VOC_{EU} = \frac{Fuel_{EU} * EF_{EU} * 0.139}{2000}$$

Where: VOC_{EU} *= monthly VOC emissions for an individual EU in tons*
$Fuel_{EU}$ *= fuel combusted in a calendar month for an individual EU in gallons*
EF_{EU} *= VOC emission factor for an individual EU in lb/MMBtu*
0.139 = assumed energy content of liquid fuel in MMBtu/gallon
2000 = pounds per ton conversion factor

Equation 2

$$VOC_{EU} = \frac{kWhr_{EU} * EF_{EU}}{453.6 * 2000}$$

Where: VOC_{EU} *= monthly VOC emissions for an individual EU in tons*
$kW\text{-}hr_{EU}$ *= monthly energy produced for an individual EU in kilowatt hours*
EF_{EU} *= VOC emission factor for an individual EU in g/kW-hr*
453.6 = grams per pound conversion factor

Table D: VOC Emission Factors

EU ID	Emission Factor
7	0.082 lb/MMBtu
8	0.082 lb/MMBtu
13	0.082 lb/MMBtu
14	0.082 lb/MMBtu
15	0.64 g/kW-hr

c. Calculate the 12-month rolling VOC emissions by adding the previous 11 months.

d. Before the end of each calendar month, calculate and record the combined SO_2 emissions from EU IDs 7, 8, and 13 through 15 for the previous month, using the mass balance calculation in Equation 3.

Equation 3

$$SO_2 = \frac{M_{fuel} * 0.0001 * 7 * 2}{2000}$$

Where: *SO_2 = monthly SO_2 emissions for EU IDs 7, 8, and 13–15 in tons*
M_{fuel} = monthly fuel usage for EU IDs 7, 8, & 13–15 combined, in gallons
0.0001 = maximum allowable sulfur content for EU IDs 7, 8, & 13–15, in lb S/lb fuel
7 = assumed density of liquid fuel in pound per gallon
2 = moles of SO_2 produced per mole of sulfur in fuel
2000 = pounds per ton conversion factor

e. Calculate the 12-month rolling SO_2 emissions by adding the previous 11 months.

f. Include copies of the records required in Conditions 21.2.b through 21.2.e in the operating report required in Condition 64.

g. Report in accordance with Condition 63 if the combined VOC emissions calculated under Condition 21.2.c exceeds 51.2 tpy or if the combined SO_2 emissions calculated under Condition 21.2.e exceeds 46.8 tpy.

[Condition 11, Minor Permit AQ0215MSS05, MM/DD/2020]
[40 CFR 71.6(a)(3)]

22. ORL to Avoid PSD Review for PM-10. The Permittee shall limit PM-10 emissions from EU IDs 7, 8, 13, 14, 15, and 17 to no more than 22.3 tons per year and shall calculate actual PM-10 emissions as follows:

[Condition 13, Minor Permit AQ0215MSS05, MM/DD/2020]
[18 AAC 50.040(j) & 50.326(j)]

[40 CFR 71.6(a)(1)]

22.1. Maintain a dedicated kilowatt meter with an accuracy of plus or minus two percent on EU IDs 7, 8, 13 through 15, and 17.

a. Monitor and record the monthly kilowatts produced by EU IDs 7, 8, 13 through 15, and 17.

[Conditions 13.1 & 13.1a, Minor Permit AQ0215MSS05, MM/DD/2020]
[40 CFR 71.6(a)(3)]

22.2. Before the end of each calendar month calculate and record the combined PM-10 emissions from EU IDs 7, 8, 13, 14, 15, and 17 for the previous month using Equation 4 and fuel use records from Condition 21.2.a(i), Equation 5 and power production records from Condition 22.1.a, and PM-10 emission factors in Table E or more recent emission factors from a Department accepted source test.

Equation 4

$$PM_{10} = \frac{Fuel_{EU} * EF_{EU} * 0.139}{2000}$$

Where: *PM_{10} = monthly PM_{10} emissions for an individual EU in tons*
$Fuel_{EU}$ = fuel combusted in a calendar month for an individual EU in gallons
EF_{EU} = PM_{10} emission factor for an individual EU in lb/MMBtu
0.139 = assumed energy content of liquid fuel in MMBtu/gallon
2000 = pounds per ton conversion factor

Equation 5

$$PM_{10} = \frac{kWhr_{EU} * EF_{EU}}{453.6 * 2000}$$

Where: *PM_{10} = monthly PM_{10} emissions for an individual EU in tons*
kW-hr$_{EU}$ = monthly power produced for an individual EU in kilowatt hours
EF_{EU} = PM_{10} emission factor for an individual EU in g/kW-hr
453.6 = grams per pound conversion factor

Table E – PM-10 Emission Factors

EU ID	Emission Factor
7	0.573 lb/MMBtu
8	0.573 lb/MMBtu
13	0.187 g/kW-hr
14	0.187 g/kW-hr
15	0.394 g/kW-hr
17	0.2 g/kW-hr

22.3. Calculate the 12-month rolling PM-10 emissions by adding the previous 11 months.

22.4. Report the information in Conditions 22.2 and 22.3 in the operating report required in Condition 64.

22.5. Report in accordance with Condition 63 if the combined PM-10 emissions calculated under Condition 22.3 exceed the limit in Condition 22.

[Conditions 13.2 –13.5, Minor Permit AQ0215MSS05, MM/DD/2020]
[40 CFR 71.6(a)(3)]

22.6. The Permittee shall source test EU ID 15 and either EU ID 13 or 14 for PM-10 emissions within one year of the issue date of this operating permit to verify the emission factors in Table E.

a. Testing shall be conducted:

(i) In accordance with the requirements of Section 6 of this permit, and

(ii) within ± 10 percent of 50 and 75 percent of maximum possible load and within ± 10 percent of 100 percent of maximum possible or maximum achievable load.

b. Three one-hour runs shall be conducted at each load specified in Condition 22.6.a(ii).

[40 CFR 71.6(a)(3) & 71.6(c)(6)]

23. ORL to Avoid PSD Review for NOx. The Permittee shall limit the combined NOx emissions from EU IDs 7 and 16 to no more than 161.7 tons per year and shall calculate actual NOx emissions as follows:

23.1. Install and maintain a dedicated kilowatt meter with an accuracy of plus or minus two percent on EU ID 16.

a. Monitor and record the monthly kilowatts produced by EU ID 16.

23.2. Before the end of each calendar month calculate and record the combined NOx emissions from EU IDs 7 and 16 for the previous month using Equation 6 and power production records from Conditions 22.1.a and 23.1.a, and NOx emission factors in Table F or more recent emission factors from a Department accepted source test.

Equation 6

$$NOx = \frac{kWhr_7 * EF_7 + kWhr_{16} * EF_{16}}{453.6 * 2000}$$

Where: *NOx = monthly NOx emissions for EU IDs 7 & 16 combined, in tons*
kW-hr = monthly energy produced for an individual EU, in kilowatt hours
EF = NOx emission factor for an individual EU, in g/kW-hr
453.6 = grams per pound conversion factor

Table F – NOx Emission Factors

EU ID	Emission Factor
7	17.7 g/kW-hr
16	8.83 g/kW-hr

23.3. Calculate the 12-month rolling NOx emissions by adding the previous 11 months.

23.4. Include copies of the record required under Conditions 23.2 and 23.3 in the operating report required in Condition 64.

23.5. Report in accordance with Condition 63 if the combined NOx emissions calculated under Condition 23.3 exceed the limit in Condition 23.

24. **Power Production Limit**. The Permittee shall limit the power produced by EU ID 16 to no greater than 3,760 kWe for any given hour. Demonstrate compliance as follows:

24.1. Monitor and record hourly power production for EU ID 16.

a. Identify the highest hourly power produced for each calendar day and the highest hourly power produced for each calendar month.

24.2. Include the highest hourly power produced (kWe) by EU ID 16 and the date on which it occurred, for each calendar month of the reporting period.

24.3. Report in accordance with Condition 63 any time the power produced by EU ID 16 exceeds the limit in Condition 24.

Insignificant Emissions Units

25. 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:

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

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

25.2. **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)]

25.3. **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)]

25.4. General MR&R for Insignificant Emissions Units

a. The Permittee shall submit the compliance certifications of Condition 65 based on reasonable inquiry;

b. The Permittee shall comply with the requirements of Condition 46;

c. The Permittee shall report in the operating report required by Condition 64 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.

[18 AAC 50.346(b)(4)]

Section 4. Federal Requirements

For this section of this permit, the Department defines the "the Administrator" to mean "the EPA Administrator and the Department".

40 CFR Part 60 New Source Performance Standards

Subpart A

26. 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 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]

26.1. 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.

27. 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 28. 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

28. For EU IDs 15 through 17 listed in Table A, the Permittee shall comply with the following applicable requirements of NSPS Subpart IIII for stationary compression ignition (CI) internal combustion engines (ICE) whose construction, modification, or reconstruction commences after July 11, 2005.

[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]

28.1. Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in Conditions 28.3 through 28.5 over the entire life of the engine.

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

28.2. Comply with the applicable provisions of Subpart A as specified in Table 8 to Subpart IIII.

[40 CFR 71.6(a)(1)]
[40 CFR 60.4218 & Table 8, Subpart IIII]

NSPS Subpart IIII Emission Standards

28.3. For EU IDs 15 and 16, the Permittee must comply with the following emission standards:

a. 9.8 g/kW-hr of THC + NOx

b. 5.0 g/kW-hr of CO

c. 0.50 g/kW-hr of PM

[40 CFR 71.6(a)(1)]
[40 CFR 60.4201(d)(1) & (3) & 60.4204(b), Subpart IIII]

28.4. For EU ID 17, the Permittee must comply with the following emission standards:

a. 4.0 g/kW-hr of NMHC + NOx

b. 3.5 g/kW-hr of CO

c. 0.20 g/kW-hr of PM

[40 CFR 71.6(a)(1)]
[40 CFR 60.4202(a)(2) & 60.4205(b), Subpart IIII]

28.5. Notwithstanding the requirements in Condition 28.4, EU ID 17 may be certified to the provisions of 40 CFR part 94.

[40 CFR 60.4202(g) & (g)(1), Subpart IIII]

28.6. For EU IDs 15 through 17, the Permittee shall comply with the following:

a. Owners and operators who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in 40 CFR 60.4212.

[40 CFR 71.6(a)(3)]
[40 CFR 60.4204(d) & 60.4205(e), Subpart IIII]

NSPS Subpart IIII Compliance Requirements

28.7. For EU IDs 15 through 17, the Permittee shall comply with the following:

a. You must do all of the following, except as permitted under Condition 28.7.c:

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

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

(ii) Change only those emission-related settings that are permitted by the manufacturer; and

(iii) 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]

b. You must comply with Conditions 28.3 and 28.4 by purchasing an engine certified to the emission standards in Condition 28.3 or 28.4, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in Condition 28.7.c.

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

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

(i) For EU ID 17, 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.

(ii) For EU IDs 15 and 16, 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)(2) & (3), Subpart IIII]

28.8. For EU ID 17, the Permittee shall comply with the following:

a. You must operate the emergency stationary ICE according to the requirements in Conditions 28.8.a(i) through 28.8.a(iii). In order for the engine to be considered an emergency stationary ICE under NSPS Subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in nonemergency situations for 50 hours per year, as described in Conditions 28.8.a(i) through 28.8.a(iii), is prohibited. If you do not operate the engine according to the requirements in Conditions 28.8.a(i) through 28.8.a(iii), the engine will not be considered an emergency engine under NSPS Subpart IIII and must meet all requirements for non-emergency engines.

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

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

(ii) You may operate your emergency stationary ICE for the purpose specified in Condition 28.8.a(ii)(A) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 28.8.a(iii) counts as part of the 100 hours per calendar year allowed by this paragraph.

[40 CFR 60.4211(f)(1) & (2), Subpart IIII]

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

[40 CFR 60.4211(f)(2)(i), Subpart IIII]

(iii) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in Condition 28.8.a(ii). Except as provided in Condition 28.8.a(iii)(A), the 50 hours per calendar year for nonemergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

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

(A) The 50 hours per year for nonemergency situations can be used to supply power as part of a financial arrangement with another entity if all of the conditions of 40 CFR 60.4211(f)(3)(i)(A) through (E) are met.

[40 CFR 60.4211(f)(3)(i), Subpart IIII]

NSPS Subpart IIII Test Methods

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

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

NSPS Subpart IIII Notification, Reporting, and Recordkeeping Requirements

28.10. For EU IDs 15 and 16, the Permittee must keep records of the following information:

[40 CFR 71.6(a)(3)]
[40 CFR 60.4214(a) & (a)(2), Subpart IIII]

a. All notifications submitted to comply with NSPS Subpart IIII and all documentation supporting any notification.

b. Maintenance conducted on the engine.

c. Documentation from the manufacturer that the engine is certified to meet the emission standards.

[40 CFR 60.4214(a)(2)(i) through (iii), Subpart IIII]

28.11. If EU ID 17 operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in Condition 28.8.a(iii)(A), you must submit an annual report according to the requirements in 40 CFR 60.4214(d)(1) through (3).

[40 CFR 71.6(a)(3)]
[40 CFR 60.4214(d), Subpart IIII]

40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants

Subparts A & M

29. The Permittee shall comply with the applicable requirements set forth in 40 CFR 61.145, 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) & (2)(F), & 50.326(j)]
[40 CFR 61, Subparts A & M, and Appendix A]

40 CFR Part 63 National Emission Standards for Hazardous Air Pollutants

Subpart A

30. National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart A. For EU IDs 13 and 14, the Permittee shall 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

31. NESHAP Subpart ZZZZ Applicability. For EU IDs 13 through 17 listed in Table A, the Permittee shall comply with the following applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions.

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

40 CFR 71.6((a)(1)
[40 CFR 63.6585 & 63.6590, Subpart ZZZZ]

31.1. For EU IDs 15 through 17, the Permittee must meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines. No further requirements apply for such engines under 40 CFR 63.

[40 CFR 63.6590(c), Subpart ZZZZ]
[40 CFR 71.6(a)(1)]

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

31.2. For EU IDs 13 and 14, the Permittee shall comply with the following:

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

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

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

b. You have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Condition 31.2.a(i). The oil analysis must be performed at the same frequency specified for changing the oil in Condition 31.2.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.

[40 CFR 63.6625(i) & Table 2d, Subpart ZZZZ]
[40 CFR 71.6(a)(3)]

31.3. For EU IDs 13 and 14, during periods of startup you must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

[40 CFR 63.6625(h) & Table 2d, Subpart ZZZZ]
[40 CFR 71.6(a)(1)]

NESHAP Subpart ZZZZ General Requirements

31.4. For EU IDs 13 and 14, the Permittee shall comply with the following:

a. You must be in compliance with the requirements under Condition 31 at all times.

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

[40 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

31.5. For EU IDs 13 and 14, you must demonstrate continuous compliance with each requirement in Condition 31.2.a by:

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

a. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or

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

[Table 6, Item 9; Subpart ZZZZ]

NESHAP Subpart ZZZZ Recordkeeping Requirements

31.6. For EU IDs 13 and 14, the Permittee shall comply with the following:

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

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

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

c. 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.

d. 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)]

NESHAP Subpart ZZZZ Reporting Requirements

31.7. For EU IDs 13 and 14, the Permittee shall comply with the following:

a. 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)]

b. You must report all deviations as defined in NESHAP Subpart ZZZZ in the monitoring report required by Condition 64.

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

40 CFR Part 82 Protection of Stratospheric Ozone

32. Subpart F – Recycling and Emissions Reduction. The Permittee shall comply with the applicable standards for recycling and emission reduction of refrigerants set forth in 40 CFR 82, Subpart F.

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

33. Subpart G – Significant New Alternatives. The Permittee shall comply with the applicable prohibitions set out in 40 CFR 82.174.

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

34. Subpart H – Halons Emissions Reduction. The Permittee shall comply with the applicable prohibitions set out in 40 CFR 82.270.

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

General NSPS and NESHAP Requirements

35. NESHAP Applicability Determinations. The Permittee shall 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 described in 40 CFR 63.1(b) and 63.10(b)(3). If a 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).

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

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

36. NSPS and NESHAP Reports. The Permittee shall:

36.1. **Reports:** Except for 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 64 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 submitted through CDX/CEDRI, state in the operating report the date and a brief description of each of the online reports submitted during the reporting period; and

36.2. **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 60.13, 63.10(d) & (f) & 40 CFR 71.6(c)(6)]

Section 5. General Conditions

Standard Terms and Conditions

37. 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)]

38. 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)]

39. 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)]

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

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

41. Assessable Emissions. The Permittee shall pay to the Department annual emission fees based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities 10 tons per year or greater. The quantity for which fees will be assessed is the lesser of

41.1. the stationary source's assessable potential to emit of 1,427 tpy; or

41.2. the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon credible evidence of actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by the most representative of 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)]

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

42.1. no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Suite 303, PO Box 111800, Juneau, AK 99811-1800; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or

42.2. if no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in Condition 41.1.

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

43. 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)]

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

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

44.1. 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 44.1.a or to address the results of Department inspections that found potential problems; and

(ii) to prevent future dust problems.

44.2. The Permittee shall report according to Condition 46.

45. 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)]

46. 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)]

46.1. Monitoring, Recordkeeping, and Reporting for Condition 46:

a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 63.

b. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 46.

c. 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 46; or

(ii) the Department notifies the Permittee that it has found a violation of Condition 46.

d. The Permittee shall keep records of

(i) the date, time, and nature of all emissions complaints received;

(ii) the name of the person or persons that complained, if known;

(iii) a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 46; and

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

e. With each stationary source operating report under Condition 64, the Permittee shall include a brief summary report which must include

(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.

f. 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.

47. 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[6] listed in Conditions 13, 14, 15, 28 and 32 (refrigerants), the Permittee shall

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

47.2. report in accordance with Condition 63; 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

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

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

48.2. include this condition in the annual certification required under Condition 65.

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

[6] 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

49. 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)]

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

[18 AAC 50.220(b)]

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

50.2. 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.

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

51.1. 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]

51.2. 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]

51.3. 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]

51.4. 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)]

51.5. 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]

51.6. 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.

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

51.7. 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]

52. 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)]

53. Test Exemption. The Permittee is not required to comply with Conditions 55, 56 and 57 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.3) or Smoke/No Smoke Plan (Condition 2.4).

[18 AAC 50.345(a)]

54. 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)]

55. Test Plans. Except as provided in Condition 53, 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 49 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)]

56. Test Notification. Except as provided in Condition 53, 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)]

57. **Test Reports.** Except as provided in Condition 53, 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 60. 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)]

58. **Particulate Matter Calculations.** In source testing for compliance with the particulate matter standards in Conditions 5 and 25.2, 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

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

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

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

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

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

b. the date(s) analyses were performed;

c. the company or entity that performed the analyses;

d. the analytical techniques or methods used;

e. the results of such analyses; and,

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

Reporting Requirements

60. 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.

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

a. a certifying authority registered under AS 09.80.020 verifies that the electronic signature is authentic; and

b. the person providing the electronic signature has made an agreement, with the certifying authority described in Condition 60.1.a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

[18 AAC 50.345(a) & (j), 50.205, & 50.326(j)]
[40 CFR 71.6(a)(3)(iii)(A)]

61. Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall submit reports, compliance certifications, and/or other submittals required by this permit, to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee shall submit the documents either by hard copy or electronically.

61.1. Provide electronic submittals, either by:

a. E-mail under a cover letter using dec.aq.airreports@alaska.gov; or

b. using the Department's Air Online Services at http://dec.alaska.gov/applications/air/airtoolsweb/.

[18 AAC 50.326(j)]
[40 CFR 71.6(a)(3)(iii)(A)]

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

[18 AAC 50.345(a) & (i), 50.200, & 50.326(a) & (j)]
[40 CFR 71.5(a)(2) & 71.6(a)(3)]

63. Excess Emissions and Permit Deviation Reports.

63.1. Except as provided in Condition 46, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commences or is discovered, report

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

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

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

c. report all other excess emissions and permit deviations

(i) within 30 days after the end of the month during which the emissions or deviation occurred, except as provided in Condition 63.1.c(iii); or

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 63.1.c(i); and

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

63.2. When reporting either excess emissions or permit deviations, the Permittee shall report using either the Department's online form, which can be found at http://dec.alaska.gov/applications/air/airtoolsweb, 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.

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

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

64. Operating Reports. During the life of this permit[7], the Permittee shall submit an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

64.1. 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.

64.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 64.1, the Permittee shall identify

a. the date of the deviation;

b. the equipment involved;

c. the permit condition affected;

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

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

64.3. when excess emissions or permit deviations have already been reported under Condition 63 the Permittee shall cite the date or dates of those reports.

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

a. the date of the emissions;

b. the equipment involved;

c. the permit condition affected; and

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

d. the monitoring result which triggered the additional monitoring.

64.5. **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)]

65. Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report according to Condition 61.

65.1. 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;

65.2. **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.

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

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

66. Emission Inventory Reporting. The Permittee shall submit to the Department reports of actual emissions, by emissions unit, of CO, NH_3, NOx, PM_{10}, $PM_{2.5}$, SO_2, VOCs and lead (Pb) (and lead compounds) using the form in Section 14 of this permit, as follows:

66.1. Each year by April 30, if the stationary source's potential to emit for the previous calendar year equals or exceeds:

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

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

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

a. 0.5 tpy of actual Pb, or

b. 1,000 tpy of CO; or

c. 100 tpy of SO_2, NH_3, PM_{10}, $PM_{2.5}$, NO_X or VOCs.

66.3. For reporting under Condition 66.2, the Permittee shall report in 2015 for calendar year 2014, 2018 for calendar year 2017, 2021 for calendar year 2020, etc., in accordance with the Environmental Protection Agency set schedule.

66.4. Include in the report required by this condition, the required data elements contained within the form in Section 14 or those contained in Table 2A of Appendix A to Subpart A of 40 CFR 51 for each stack associated with an emissions unit.

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

Section 8. Permit Changes and Renewal

67. Permit Applications and Submittals. The Permittee shall comply with the following requirements for submitting application information to the US Environmental Protection Agency (EPA):

67.1. 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;

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

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

67.4. 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)]

68. 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)]

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

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

69.2. 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;

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

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

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

70. Operational Flexibility. The Permittee may make CAA Section 502(b)(10)[8] changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions):

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

70.2. For each such change, the notification required by Condition 70.1 shall include a brief description of the change within the permitted stationary source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

70.3. The permit shield described in 40 CFR 71.6(f) shall not apply to any change made pursuant to Condition 70.

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

71. Permit Renewal. To renew this permit, the Permittee shall submit to the Department[9] an application under 18 AAC 50.326 no sooner than March 14, 2022 and no later than March 14, 2023. The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 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)]

[8] 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.

[9] 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. General Compliance Requirements

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

72.1. included and specifically identified in the permit; or

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

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

73. 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

73.1. an enforcement action;

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

73.3. denial of an operating permit renewal application.

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

74. 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)]

75. 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)]

76. 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

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

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

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

76.4. 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)]

77. 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.

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

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

78.2. 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)]

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

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

Table G - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
(3) Diesel Storage Tanks (10,000 gallons each)	40 CFR 60 Subpart K	Two tanks were constructed and installed in 1943. The other was built in 1995.
	40 CFR 60 Subpart Ka	Two tanks were constructed and installed in 1943. The other was built in 1995.
	40 CFR 60 Subpart Kb	Two tanks were constructed and installed prior to 1984. The other was constructed after 1984, but has a capacity of 10,000 gallons.

[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."

- 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, is Plume…: check "attached" if water droplet plume forms prior to exiting stack, and "detached" if water droplet plume forms after exiting stack.
- Point in Plume at Which Opacity was Determined: describe physical location in plume where readings were made (e.g., 1 ft above stack exit or 10 ft. after dissipation of water plume).
- Describe Plume Background: object plume is read against, include texture and atmospheric conditions (e.g., hazy).
- Background Color: sky blue, gray-white, new leaf green, etc.
- Sky Conditions: indicate cloud cover by percentage or by description (clear, scattered, broken, overcast).
- Wind Speed: record wind speed; can use Beaufort wind scale or hand-held anemometer to estimate.
- Wind Direction From: direction from which wind is blowing; can use compass to estimate to eight points.
- Ambient Temperature: in degrees Fahrenheit or Celsius.
- Wet Bulb Temperature: can be measured using a sling psychrometer
- RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
- Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.
- Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.
- Sun's Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen's shadow crosses the observer's position.
- Observation Date: date observations conducted.
- Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
- Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.
- Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.
- Range of Opacity: note highest and lowest opacity number.
- Observer's Name: print in full.
- Observer's Signature, Date: sign and date after performing VE observation.
- Organization: observer's employer.
- Certified By, Date: name of "smoke school" certifying observer and date of most recent certification.

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

Page No.____________

Stationary Source Name	Type of Emission Unit	
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:		Print Observer's Name	
Signature:		Observer's Signature	Date Observer's Affiliation:
Title	Date	Certifying Organization Certified By:	Date

Data Reduction:

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

Average Opacity Summary:

Set Number	Time			Opacity		Comments
	Start	End		Sum	Average	

Section 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 9. 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[10]

Dutch Harbor Power Plant — **Stationary Source (Facility) Name**

AQ0215TVP04 — **Air Quality Permit Number.**

City of Unalaska, Department of Public Utilities — **Company Name**

When did you discover the Excess Emissions/Permit Deviation?

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

When did the event/deviation?

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

☐ Deviation from Permit Condition – Complete Section 2 and Certify

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

Section 1. Excess Emissions

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

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

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

☐ Control Equipment Failure ☐ Schedule Maintenance/Equipment Adjustment

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

(c) **Description**

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

(d) **Emissions Units Involved:**

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

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

[10] Revised as of September 27, 2010.

(e) **Type of Incident** (please check only one):

☐ Opacity _____ % ☐ Venting _____ gas/scf ☐ Control Equipment Down

☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Recordkeeping Failure

☐ Marine Vessel Opacity ☐ Flaring ☐ Other

(f) **Unavoidable Emissions:**

Do you intend to assert that these excess emissions were unavoidable? ☐ Yes ☐ No

Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ Yes ☐ No

Certify Report (go to end of form)

Section 2. Permit Deviations

(a) **Permit Deviation Type** (check only one box corresponding with the section in the permit):

☐ Emissions Unit-Specific

☐ Failure to Monitor/Report

☐ General Source Test/Monitoring Requirements

☐ Recordkeeping/Reporting/Compliance Certification

☐ Standard Conditions Not Included in the Permit

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

☐ Generally Applicable Requirements

☐ Reporting/Monitoring for Diesel Engines

☐ Insignificant Emissions Unit

☐ Stationary Source Wide

(b) **Emissions Units Involved:**

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

EU ID	EU Name	Permit Condition/ Potential Deviation

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

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) **Corrective Actions:**

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certification:

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

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

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

To submit this report:

1. Submission of information contained in this report can be made electronically at the following website:
   http://dec.alaska.gov/applications/air/airtoolsweb/

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

   Or
2. Fax this form to: 907-451-2187

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

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

   Or
5. Phone Notifications: 907-451-5173

   Phone notifications require a written follow-up report.

[18 AAC 50.346(b)(3)]

Section 14. Emission Inventory Form

Detailed instructions are available at the Department's Air Online Services (AOS) at http://dec.alaska.gov/Applications/Air/airtoolsweb/PointSourceEmissionInventory by clicking on "Emission Inventory Instructions" button.

ADEC Reporting Form **Emission Inventory Reporting** State of Alaska Department of Environmental Conservation Division of Air Quality	**Emission Inventory Year- [ ]**
Mandatory information is highlighted in bright yellow. Make additional copies as needed.	

Stationary Source Detail		
Inventory Start Date		
Inventory End Date		
ADEC ID or Permit Number		
EPA ID		
Census Area/Community		
Facility Name		
Facility Physical Location	**Address**	
	City, State, Zip Code	
	Latitude	**Longitude**
	Legal Description:	
Owner Name		
Owner Address		
Owner contact number		
Mailing Contact Information	**Address**	
	City, State, Zip Code	
Line of Business (NAICS)		
Facility Status		

Emission Unit Data			
Specifications			
ID		Design Capacity	
Description			
Emission Unit Status			
Manufacturer		Manufactured Year	
Model Number		Serial Number	
Regulations			
Regulation/Description			

Control Equipment (List All if applicable)			
ID			
System Description			
Equipment Type(s)			
Manufacturer			
Model			
Control Efficiency (%):			
Capture Efficiency (%)			
Pollutants Controlled		Reduction Efficiency (%)	
		Reduction Efficiency (%)	

Processes			
Process			
SCC Code			
Material Processed			
Period Start			
Period End			
Throughput (units):			
Summer %			
Fall %			
Winter %			
Spring %			
Operational Schedule			
Days/Week			
Hours/Day			
Weeks/Year			
Hours/Year			
Fuel Characteristics			
Heat Content	Elem. Sulfur Content (%)	H2S Sulfur Content	Ash Content (if applicable)
Heating			
Heat Input		Heat Output	Heat Values Convention

Emission Operating Type					
Pollutant	**Emission Factor**	**EF Numerator**	**EF Denominator**	**Emission Calculation Method**	**Tons**
Carbon Monoxide (CO)					
Nitrogen Oxides (NOx)					
PM10 Primary (PM10-PRI)					
PM2.5 Filterable (PM25-FIL)[11]					
PM Condensable (PM-CON)[12]					
Sulfur Dioxide (SO_2)					
NH3 (Ammonia)					
Lead and lead compounds					
Volatile Organic Compounds (VOC)					
Emissions' Release Point					
Release Point ID					
Apportion%					

[11] Report $PM_{2.5}$ filterable and particulate matter condensable portions of the $PM_{2.5}$ Primary emissions, as applicable, in accordance with Federal Regulation 40 CFR 51.15(a)(1)(vi). Refer to EPA's May 2017 "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations" (see Section 4.2.1) for guidance on the reporting of $PM_{2.5}$ filterable and condensable emissions.

[12] Please note on the inventory form if there is no available emission factor that can be used for an applicable condensable PM. For example, EPA AP-42 Table 3.3-1 does not contain a condensable particulate matter emission factor for diesel engines smaller than 600 hp.

Process	Secondary Process (if applicable)
SCC Code	(ex. 20100201)
Material Processed	
Period Start	
Period End	
Throughput (units):	
Summer %	
Fall %	
Winter %	
Spring %	
Operational Schedule	
Days/Week	
Hours/Day	
Weeks/Year	
Hours/Year	

Fuel Characteristics

Heat Content	Elem. Sulfur Content	H2S Sulfur Content	Ash Content (if applicable)

Heating

Heat Input	Heat Output	Heat Values Convention

Emissions Operating Type:

Pollutant	Emission Factor	EF Numerator	EF Denominator	Emission Calculation Method	Tons
Carbon Monoxide (CO)					
Nitrogen Oxides (NOx)					
PM10 Primary (PM10-PRI)					
PM2.5 Primary (PM25-PRI)					
Sulfur Dioxide (SO2)					
Lead and Lead Compounds					
NH3 (Ammonia)					
Volatile Organic Compounds (VOC)					

Emissions' Release Point			
Release Point ID			
Apportion%			

Stack Detail (Release Point)	
> Specifications	
ID	
Type	
Description	
Stack Status	
> Stack Parameters	
Stack Height (ft)	
Stack Diameter (ft)	
Exit Gas Temp (F)	
Exit Gas Velocity (fps)	
Exit Gas Flow Rate (acfm)	
> Geographic Coordinate	
Latitude	
Longitude	
Datum	
Accuracy (meters)	
Base Elevation (meters)	

Certification:

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

Printed Name:_____Title_____Date _____

Signature:_____ Phone number_____

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

To submit this report:

1. Direct data entry for emission inventory can be done through the AOS using the Permittee Portal option: http://dec.alaska.gov/Applications/Air/airtoolsweb/.

Or

2. Fax this form to: 907-269-7508

Or

3. E-mail to: DEC.AQ.airreports@alaska.gov

Or

4. Mail to: ADEC
Air Permits Program
ATTN: Emissions Inventory
555 Cordova Street
Anchorage, Alaska 99501

[18 AAC 50.346(b)(9)]