Application for Renewal of an Air Quality Operating Permit

Providence Alaska Medical Center

Providence Health System – Washington Inc.

3200 Providence Drive
Anchorage, AK 99519

Prepared by:

SLR International Corporation

2700 Gambell Street, Suite 200, Anchorage, Alaska, 99503

SLR Project No.: 105.00541.23001

Client Reference No: 0008

January 8, 2024

Revision: 0

Appendices

Appendix A Stationary Source

Application for Renewal of an Air Quality Operating Permit

Providence Alaska Medical Center

Providence Health System – Washington Inc.

SLR Project No.: 105.00541.23001

January 8, 2024

A.1 Form A1: Stationary Source (General Information)

A.2 Form A4: Title V Air Operating Permit Renewal Application Information

A.3 Attachment: 2022 Annual Compliance Certification

FORM A1
Stationary Source (General Information)

GENERAL INFORMATION

1. Permittee:

Permittee Name: Providence Health System – Washington Inc.

Mailing Address Line 1: 506 Second Avenue, Suite 1200

Mailing Address Line 2

City: Seattle State: WA Zip Code: 98014-2329

2. Stationary Source Name: Providence Alaska Medical Center

3. Stationary Source Physical Address:

Physical Address Line 1: 3200 Providence Drive

Physical Address Line 2 P.O. Box 196604

City: Anchorage State: AK Zip Code: 99519

4. Location: Latitude: 61.186332 Longitude: -149.8179

5. Primary SIC Code: 8062 SIC Code Description: General Medical and Surgical Hospitals ***Primary NAICS Code:*** 622110 – General Medical and Surgical Hospitals

6. Current/Previous Title V Air Permit No.: AQ0486TVP03 Expiration Date: October 23, 2024

7. Does this application contain confidential data? ☐ Yes ☒ No

8. APPLICATION IS BEING MADE FOR:

☐ Initial Title V Permit for this Stationary Source ☐ Modify Title V Permit (currently permitted) ☒ Title V Permit Renewal

9. CONTACT INFORMATION (Attach additional sheets if needed)

Owner:

Name/Title: Providence Health System – Washington Inc.

Mailing Address Line 1: 506 Second Avenue, Suite 1200

Mailing Address Line 2

City: Seattle State: WA Zip Code: 98014

Operator:

Name/Title: Providence Health System – Washington Inc.

Mailing Address Line 1: 506 Second Avenue, Suite 1200

Mailing Address Line 2

City: Seattle State: WA Zip Code: 98014

Permittee's Responsible Official:

Name/Title: Dale Rahn & Kenneth Nauseda

Mailing Address Line 1: 3200 Providence Drive

Mailing Address Line 2: P.O. Box 196604

City: Anchorage State: AK Zip Code: 99519

Designated Agent:

Name/Title: Dale Rahn, Executive Director Real Estate Operations

Mailing Address Line 1: 3200 Providence Drive

Mailing Address Line: 2 P.O. Box 196604

City: Anchorage State: AK Zip Code: 99519

Stationary Source and Building Contact:

Name/Title: Kenneth Nauseda, Supervising Engineer

Mailing Address Line 1:3200 Providence Drive

Mailing Address Line 2: P.O. Box 196604

City: Anchorage State: AK Zip Code: 99519

Phone: (907) 212-5058 Email: Kenneth.Nauseda@Providence.org

Fee Contact:

Name/Title: Dale Rahn, Executive Director Real Estate Operations

Mailing Address Line 1: 3200 Providence Drive

Mailing Address Line 2: P.O. Box 196604

City: Anchorage State: AK Zip Code: 99519

Phone: (907) 212-5084 Email: Dale.Rahn @Providence.org

Permit Contact:

Name/Title: Dale Rahn, Executive Director Real Estate Operations

Mailing Address Line 1: 3200 Providence Drive

Mailing Address Line 2: P.O. Box 196604

City: Anchorage State: AK Zip Code: 99519

Phone: (907) 212-5084 Email: Dale.Rahn@Providence.org

Person or Firm that Prepared Application: SLR International Corp.

Name/Title: Chris Lindsey, Principal Scientist

Mailing Address Line 1: 2700 Gambell Street, Suite 200

Mailing Address Line 2:

City: Anchorage State: AK Zip Code: 99503

Phone: (907) 264-6916 Email: clindsey@slrconsulting.com

10. STATEMENT OF 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.

Name of Responsible Official (typed): Kenneth Nauseda Title: Supervising Engineer

X Signature (blue ink): Kenneth Nauseda Date: 1/29/2024

FORM A4

Title V Air Operating Permit Renewal Application Information

Permit Number: AQ0486TVP03

1.	Permit Contact: Name	Dale Rahn
	Title	Executive Director Real Estate Operations
	Mailing Address Line 1	3200 Providence Drive, Anchorage, AK 99519
	Mailing Address Line 2	P.O. Box 196604
	Phone Number	(907) 212-5084
	Email	Dale.Rahn@Providence.org
2.	Were there any changes to stationary source General Information (Form A1)? If yes, complete and submit a Form A1.	Yes, please see attached Form A1.
3.	Were there any changes to the stationary source description (Form A2)? If yes, complete and submit a Form A2.	No.
4.	Were there any off-permit changes? Reference any notifications provided to the Department, and attach copies of the notifications.	No.
	If yes, integrate changes into renewal permit? [if no, explain]	N/A
5.	Have any Alaska Title I permits been issued to the stationary source since the most recent Title V permit or revision issuance?	No
	If yes, integrate changes into renewal permit? [If yes, please list. If no, explain]	N/A
6.	Will there be any changes to the operating scenario(s)? [if yes, describe and attach Form A3]	No.
7.	Will there be any new, modified, or reconstructed emission units or air pollution control equipment? [if yes, attach appropriate forms from Form Series B, C, D, and E]	No.
8.	Are the current emissions units correctly identified and defined in the permit? [if no, attach appropriate forms from Form Series B, C, D, and E]	Yes
9.	Does the CAM rule [40 CFR Part 64] apply to any of the emissions units? [if yes, review the guidance provided for CAM in the Form A4 instructions for this item]	No.
10.	Does the accidental release prevention regulation [40 CFR Part 68] apply to the facility? [if yes, provide the appropriate regulatory applicability document in detail.]	No.
11.	Are there any other new applicable requirements? [if yes, list the new applicable requirements, emissions units, and attach the appropriate Series E Form]	No.

12.	Are there any requested changes in the assessable potential to emit other than those identified in item 9 above? [if yes, answer the following]	No.
	Are the changes a result of having better emissions information such as a new emission factor from a recent source test? [if yes, complete and attach any applicable emissions forms from Series D. Attach additional information as necessary to fully document.]	No.
	Are the changes due to an increase in production? [if yes, complete and attach the applicable emissions form from Series D. Attach additional information as necessary to fully document.]	No.
13.	Is the stationary source in compliance with all of the conditions of the current permit? If yes, attach a compliance certification. If no, attach a compliance schedule and/or actions taken for any out-of-compliance emission units.	No, please see attached 2022 Annual Compliance Certification.
14.	Are there any requested changes to testing and/or monitoring conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	No.
15.	Are there any requested changes to monitoring conditions other than those being replaced by CAM? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	No.
16.	Are there any requested changes to recordkeeping conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	No.
17.	Are there any requested changes to reporting conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	No.
18.	Are there any requested changes to the non-applicable requirements (i.e. permit shield)? [if yes, identify the emission unit, the requested change, and the reason in the appropriate Series B and/or D form. If the change applies stationary source-wide, complete the appropriate Series E form. Attach additional information as necessary to fully document.]	No.

19.	Are there any other requested changes to any condition? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	Yes, please see attached E forms.

Statement of 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.

Kenneth Nauseda
Name of Responsible Official

Supervising Engineer
Title

Kenneth Nauseda
Signature (blue ink)

1-29-2024
Date

Annual Compliance Certification
Providence Alaska Medical Center Operating Permit No. AQ0486TVP03
01/01/2022 through 12/31/2022

Permit Condition		Compliance Status	Method Used to Determine Status
No(s).	Summary/Description		[40 C.F.R. 71.6 (c) (5) (iii) (B)]
Section 3. State Requirements			
Visible Emissions Standards			
1, 1.1	**Industrial Process and Fuel-Burning Equipment Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU IDs 1 through 4, 17, 22, 28 through 30, 35, 39, 42 through 46 and 52 listed in Table A to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes. 1.1. For EU IDs 22, 30, 35, 39, 42 through 46, monitor, record and report in accordance with Conditions 2 through 4.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
1.2, 1.3, 1.4, 1.5	1.2. For EU IDs 28 and 29, burn only gas as fuel. Monitoring for these emission units shall consist of a statement in each operating report under Condition 70 indicating whether each of these emission units burned only gas during the period covered by the report. Report under Condition 69 if any fuel is burned other than gas. 1.3. For EU ID 17, as long as the emissions unit does not exceed the limit in Condition 14, monitoring shall consist of an annual compliance certification under Condition 71 with the visible emissions standard. 1.4. For EU ID 52, monitoring shall consist of an annual compliance certification under Condition 71 with the visible emissions standard based on reasonable inquiry. 1.5. For EU IDs 1 through 4, use only gas as primary fuel. Monitoring for these emissions units shall consist of a statement in each operating report required in Condition 70 indicating whether each of these emissions units fired gas as the primary fuel during the period covered by the report. If operation on a back-up liquid fuel occurred during the period covered by the report, the Permittee shall monitor, record and report according to Condition 12.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
Visible Emissions Monitoring, Recordkeeping and Reporting			
2, 2.1	**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 22, 30, 35, 39, and 42 through 46 for visible emissions using the Method 9 Plan under Condition 2.2. 2.1. The Permittee may for each unit elect to continue the visible emissions monitoring schedule in effect from the previous permit at the time a renewed permit is issued, if applicable.	Continuous	HSE Records Review
2.2	2.2. **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.** (i) Except as provided in Condition 2.1 and Condition 2.2.a(iii), observe exhaust for 18 minutes within six months after the issue date of this permit. (ii) For any unit replaced during the term of this permit, observe exhaust for 18 minutes within 30 days of startup. (iii) Observe the exhaust of EU ID 46 within 90 days after startup. 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 2.2.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 2.2.b, until the criteria in Condition 2.2.c for semiannual monitoring are met.	Continuous	HSE Records Review
3	**Visible Emissions Recordkeeping.** When required by Condition 1.1, or in the event of replacement of any EU IDs 22, 30, 35, 39, and 42 through 46 during the permit term, the Permittee shall keep records as follows: 3.1. When using the Method 9 Plan of Condition 2.2, 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.	Continuous	HSE Records Review
4	**Visible Emissions Reporting.** When required by Condition 1.1, or in the event of replacement of any of EU IDs 22, 30, 35, 39, and 42 through 46 during the permit term, the Permittee shall report visible emissions as follows: 4.1. Include in each operating report required under Condition 70: a. 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. b. a summary of any monitoring or recordkeeping required under Conditions 2 and 3 that was not done. 4.2. Report under Condition 69: 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. 4.3. For the testing required under Condition 2.2.a(iii), submit the results of the surveillance records to the Department within 30 days of completing the source test.	Continuous	HSE Records Review

Permit Condition		Compliance Status	Method Used to Determine Status
No(s).	Summary/Description		[40 C.F.R. 71.6 (c) (5) (iii) (B)]
Particulate Matter Emissions Standards			
5	**Industrial Process and Fuel-Burning Equipment Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from EU IDs 1 through 4, 17, 22, 28 through 30, 35, 39, 42 through 46, and 52 listed in Table A to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours. 5.1. For EU IDs 22, 30, 35, 39, and 42 through 46, monitor, record and report in accordance with Conditions 6 through 8. 5.2. For EU IDs 28 and 29, burn only gas as fuel. Monitoring for these emissions units shall consist of a statement in each operating report under Condition 70 indicating whether each of these emissions units fired only gas during the period covered by the report. Report under Condition 69 if any fuel other than gas is burned. 5.3. For EU ID 17, as long as the emissions unit does not exceed the limit in Condition 14, monitoring shall consist of an annual compliance certification under Condition 71 with the particulate matter standard. 5.4. For EU ID 52, monitoring shall consist of an annual compliance certification under Condition 71 with the particulate matter emissions standard based on reasonable inquiry. 5.5. For EU IDs 1 through 4, use gas as primary fuel. Monitoring for these emissions units shall consist of a statement in each operating report required in Condition 70 indicating whether each of these emissions units fired gas as the primary fuel during the period covered by the report. If operation on a back-up liquid fuel occurred during the period covered by the report, the Permittee shall monitor, record and report according to Condition 12.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
Particulate Matter MR&R			
6	**Particulate Matter Monitoring.** The Permittee shall conduct source tests on diesel engines, EU IDs 22, 30, 35, 39, and 42 through 46, to determine the concentration of particulate matter in the exhaust of each emissions unit as follows: 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 2.2 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.	Continuous	HSE Records Review
7	**Particulate Matter Recordkeeping.** Within 180 calendar days of installation of the emissions unit, the Permittee shall record the exhaust stack diameter of EU ID 46. Report the stack diameter in the next operating report under Condition 70.	Continuous	HSE Records Review
8	**Particulate Matter Reporting.** The Permittee shall report as follows: 8.1 Report under Condition 69: 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; 8.2. 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; 8.3. in each operating report under Condition 70, 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.	Continuous	HSE Records Review
9	**Particulate Matter Monitoring.** When required by Condition 12.2, the Permittee shall conduct source tests on EU IDs 1 through 4 to determine the concentration of particulate matter in the exhaust of each emissions unit as follows: 9.1. Except as allowed under Condition 9.3, conduct a particulate matter source test according to the requirements set out in Section 6 no later than 90 calendar days after any time corrective maintenance fails to eliminate visible emissions greater than the 20 percent opacity threshold for two or more 18-minute observations in a consecutive six-month period. 9.2. 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 measured during each one-hour test run. Submit a copy of these observations with the source test report. 9.3. The particulate matter source test requirement in Condition 9.1 is waived for an emissions unit if: a. a particulate matter source test on that unit has shown compliance with the particulate matter standard during the permit term; or b. take corrective action and conduct two 18-minute visible emissions observations in a consecutive six-month period to show that the excess visible emissions described in Condition 9.1 no longer occur.	Continuous	HSE Records Review
10	**Particulate Matter Recordkeeping.** The Permittee shall keep records of the results of any particulate matter testing and visible emissions observations conducted under Condition 9.	Continuous	HSE Records Review
11	**Particulate Matter Reporting.** The Permittee shall report as follows: 11.1. In each operating report required by Condition 70, include for the period covered by the report: a. the dates, EU ID(s), and results when an 18-minute opacity observation was greater than the applicable threshold criterion in Condition 9.1. b. a summary of the results of any particulate matter testing and visible emissions observations conducted under Condition 9. 11.2. Report as excess emissions, in accordance with Condition 69, any time the results of a source test for particulate matter exceed the particulate matter emission limit stated in Condition 5.	Continuous	HSE Records Review
12	The Permittee shall monitor, record, and report the monthly hours of operation when operating on a back-up liquid fuel. 12.1. For any of EU IDs 1 through 4 that does not exceed 400 hours of operations per calendar year on a back-up liquid fuel, monitoring of compliance for visible emissions and particulate matter standards shall consist of an annual certification under Condition 71. 12.2. For any of EU IDs 1 through 4, notify the Department and begin monitoring the affected emissions unit according to Condition 12.3 no later than 15 days after the end of a calendar month in which the cumulative hours of operation for the calendar year exceed any multiple of 400 hours on a back-up liquid fuel. If the observation exceeds the limit in Condition 1, monitor as described in Condition 9. If the observation does not exceed the limit in Condition 1, no additional monitoring is required until the cumulative hours of operation exceed each subsequent multiple of 400 hours on back-up liquid fuel during a calendar year. 12.3. When required to do so by Condition 12.2, observe the 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. 12.4. Keep records and report in accordance with Conditions 3, 4, 10, and 11. 12.5. Report under Condition 69 if the Permittee fails to comply with Conditions 12.2, 12.3 or 12.4.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
Sulfur Compound Emission Standard			
13	**Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO2, from EU IDs 1 through 4, 17, 22, 28 through 30, 35, 39, 42 through 46, and 52 to exceed 500 ppm averaged over three hours.	Continuous	HSE Records Review Field Operating/Maintenance Records Review

Permit Condition		Compliance Status	Method Used to Determine Status
No(s).	Summary/Description		[40 C.F.R. 71.6 (c) (5) (iii) (B)]
Sulfur Compound MR&R			
13.1, 13.2, 13.3, 13.4, 13.5	13.1. For EU IDs 17, 22, 30, 35, 52, and EU IDs 1 through 4 when operating on liquid fuel, the Permittee shall ensure compliance with Condition 13 by complying with Condition 17.1. a. Comply with the monitoring, recordkeeping, and reporting requirements in Conditions 17.3, 17.5, and 17.6. 13.2. For EU IDs 39 and 42 through 46, compliance with Condition 20 shall demonstrate compliance with Condition 13. a. Comply with the monitoring, recordkeeping, and reporting requirements in Conditions 20.3 through 20.5. 13.3. If a load of fuel contains greater than 0.75 percent sulfur by weight, the Permittee shall calculate SO2 emissions in ppm using either the SO2 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). 13.4. The Permittee shall report as follows: a. If SO2 emissions calculated under Condition 13.3 exceed 500 ppm, the Permittee shall report under Condition 69. When reporting under this condition, include the calculation under Section 12 or Method 19. b. The Permittee shall include in the report required by Condition 70 (i) a list of the fuel grades received at the stationary source during the reporting period; (ii) for any grade with a maximum fuel sulfur greater than 0.5 percent sulfur, the fuel sulfur of each shipment; and (iii) for fuel with a sulfur content greater than 0.75 percent, the calculated SO2 emissions in ppm. 13.5. For EU IDs 28, 29, and EU IDs 1 through 4 while operating on fuel gas, ensure compliance with Condition 13 by complying with Condition 17.2. a. Comply with the monitoring, recordkeeping, and reporting requirements in Conditions 17.4 and 17.6.	Continuous	HSE Records Review
Preconstruction Permit Requirements			
14	**Emergency Generator Hourly Limits.** Limit the operations of EU IDs 17, 22, and 30 to no more than 250 hours each in any 12 consecutive month period. 14.1. Monitor and record the hours of operation for each occasion the engines operate. 14.2. Report using the operating report under Condition 70, the hours of operation for the twelve consecutive month period for the months covered in the operating report. 14.3. Report in accordance with Condition 69 if a limit in Condition 14 is exceeded.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
15	**Boiler Distillate Oil Limits.** Limit the combined distillate fuel oil burned in EU IDs 1 through 4 to no more than 500,000 gallons in any 12 consecutive month period. 15.1. Monitor and record the combined monthly distillate oil burned in EU IDs 1 through 4. Measure the distillate oil burned using an inline meter or tank level-based meter system in the tank(s) dedicated to the boilers. 15.2. Calculate the 12 month rolling total combined distillate oil burned for each month as follows: a. Except as provided in Condition 15.2.b, before submitting each semiannual operating report required under Condition 70, calculate the combined distillate fuel burned for each 12 month period ending with a calendar month during the reporting period. b. If the combined distillate fuel burned is greater than 250,000 gallons for any 12 consecutive month period, then for every subsequent 12 month period, calculate the total distillate fuel burned by the end of the month following that 12 month period. 15.3. Report using the operating report under Condition 70, the total distillate oil burned for each twelve consecutive month period ending during the time covered by the operating report. 15.4. Report in accordance with Condition 69 if the limit in Condition 15 is exceeded.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
16	**Boiler Natural Gas Limits.** Limit the combined natural gas burned in EU IDs 1 through 4, 28, and 29 to no more than 1,000 million standard cubic feet in any 12 consecutive month period. 16.1. Monitor and record the combined monthly natural gas burned in EU IDs 1 through 4, 28, and 29. Measure the natural gas burned using flow meters. 16.2. Calculate the 12 month rolling total combined natural gas burned for each month as follows: a. Except as provided in Condition 16.2.b, before submitting each semiannual operating report required under Condition 70, calculate the combined natural gas for each 12 month period ending with a calendar month during the reporting period. b. If the combined natural gas burned is greater than 500,000 standard cubic feet in any 12 consecutive month period, then for every subsequent 12 month period, calculate the total natural gas burned by the end of the month following that 12 month period. 16.3. Report using the operating report under Condition 70, the total natural gas burned for each twelve consecutive month period ending during the time covered by the operating report. 16.4. Report in accordance with Condition 69 if the limit in Condition 16 is exceeded.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
17	**Sulfur Limits.** 17.1. Limit the fuel sulfur content of the distillate fuel oil burned in the stationary source to no greater than 0.5 percent by weight by burning only No. 1 or No. 2 grade distillate oil. 17.2. Burn pipeline quality natural gas in the gas fired units. Pipeline quality gas means natural gas with total sulfur content not to exceed 12 grains per 100 standard cubic feet of gas. 17.3. For fuel oil, obtain a statement or receipt from the fuel supplier for each fuel shipment received that documents the fuel sulfur content or grade of fuel. If a statement or receipt is not available from the supplier, analyze a representative sample of the fuel after each shipment to determine the sulfur content using ASTM Method D 396-92 or D 975-94. 17.4. For natural gas fuel, state in each operating report whether or not all gas burned in the facility was gas received by pipeline. 17.5. Attach copies of the fuel sulfur content analyses, if required, to the operating report required by Condition 70. 17.6. Report as a permit deviation under Condition 69 whenever fuel combusted does not meet the requirements of Condition 17.1 or 17.2.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
18	To protect the annual average NO2 ambient air quality standard, the Permittee shall: 18.1. **Stack Configuration:** a. Maintain the exhaust stack of EU ID 1 as a vertical release without a rain cap whenever EU ID 1 is operating. Exhaust stack of EU ID 1 may be covered when EU ID 1 is not operating. b. For EU IDs 42 through 46: (i) Install and maintain each exhaust stack as follows: (A) A release height that equals or exceeds: (1) 53 feet above grade; (2) seven feet above the generator building roof; and (3) two feet above the highest portion (penthouse) of the generator building. (B) Oriented at 60 degrees or more above the horizontal. (ii) For EU ID 46, provide as-built drawings and photographs of the exhaust stack in the first operating report required under Condition 70 that would be due after installation of the exhaust stack. 18.2. **Operational Limits:** a. Comply with the existing owner requested limits currently described in Conditions 14 through 17; and b. Comply with Condition 19.	Continuous	HSE Records Review Field Operating/Maintenance Records Review

Permit Condition		Compliance Status	Method Used to Determine Status
No(s).	Summary/Description		[40 C.F.R. 71.6 (c) (5) (iii) (B)]
19	To avoid classification as a Prevention of Significant Deterioration (PSD) major stationary source under 18 AAC 50.306 for oxides of nitrogen (NOx) emissions, the Permittee shall limit the total NOx emissions from EU ID 42 through EU ID 46 to less than 250 tons per 12-month rolling period. For EU ID 42 through EU ID 46: 19.1. Limit the combined hours of operation to no more than 2,400 hours per 12-month rolling period; 19.2. Install, maintain and operate a dedicated metering device on each emission unit to measure hours of operation; 19.3. At the end of each calendar month, record the monthly hours of operation for each emission unit; 19.4. At the end of each June and December, calculate the total hours of operation for the 12-month rolling period by combining the hours of operation of each emission unit during the month with the monthly hours of operation of all the emission units from the previous 11 months; 19.5. Report the monthly hours of operation for each emission unit, and the combined hours of operating of all the units for the preceding consecutive 11 calendar months in the operating report described under Condition 70. 19.6. If the total hours of operation for the 12-month rolling period calculated in Condition 19.4 exceed 2,400 hours, submit an excess emissions report to the Department as described under Condition 69.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
20	To avoid classification under 18 AAC 50.502(c)(3) for SO2 emissions, the Permittee shall limit the total SO2 emissions from EU IDs 37 through 47 to less than 10 tons per consecutive 12-month period as follows: 20.1. Burn only diesel fuel that complies with the applicable fuel sulfur requirements of Condition 29.4 in EU IDs 42 through 46. 20.2. Burn only diesel fuel with a sulfur content not exceeding 0.05 percent by weight in EU ID 39. 20.3. Monitor compliance with Conditions 20.1 and 20.2 by analyzing a representative sample of the fuel for each shipment to determine the sulfur content, measured in accordance with an appropriate methodology incorporated by reference within fuel specification standards ASTM D 396 92 or D 975 94. Alternatively, the Permittee may keep a certified statement or receipt from the fuel supplier for each fuel shipment received that documents the fuel sulfur content. 20.4. The Permittee shall certify in each operating report described under Condition 70 whether or not each shipment of diesel fuel burned in a. EU IDs 42 through 46 complies with Condition 20.1; and b. EU ID 39 complies with Condition 20.2. 20.5. The Permittee shall report as described under Condition 69 if diesel fuel delivered to and burned in a. EU IDs 42 through 46 does not comply with Condition 20.1. b. EU ID 39 contained more than 0.05 percent by weight sulfur.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
Insignificant Emission Units			
21	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: 21.1. **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. 21.2. **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. 21.3. **Sulfur Standard:** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO2, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours. 21.4. General MR&R for Insignificant Emissions Units a. The Permittee shall submit the compliance certifications of Condition 71 based on reasonable inquiry; b. The Permittee shall comply with the requirements of Condition 52; c. The Permittee shall report in the operating report required by Condition 70 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.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
Section 4. Federal Requirements			
40 CFR Part 60 New Source Performance Standards			
Subpart A			
22, 22.1, 22.2, 22.3, 22.4	**New Source Performance Standards (NSPS) Subpart A Notification.** For any affected facility or existing facility 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: 22.1. A notification of the date construction (or reconstruction as defined under 40 CFR 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form. 22.2. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include: a. information describing the precise nature of the change, b. present and proposed emission control systems, c. productive capacity of the facility before and after the change, and d. the expected completion date of the change. 22.3. A notification of the anticipated date for conducting the opacity observations required by 40 CFR 60.11(e)(1). The notifications shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date. 22.4. A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by 40 CFR 60.8 in lieu of Method 9 observation data as allowed by 40 CFR 60.11(e)(5). This notification shall be postmarked not less than 30 days prior to the date of the performance test.	Continuous	HSE Records Review
22.5	22.5. 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: 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.	Continuous	HSE Records Review
23	**NSPS Subpart A Startup, Shutdown, & Malfunction Requirements.** Maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU IDs 3, 4, 28, and 29, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU IDs 3, 4, 28, and 29 is inoperative.	Continuous	HSE Records Review Field Operating/Maintenance Records Review

Permit Condition		Compliance Status	Method Used to Determine Status
No(s).	Summary/Description		[40 C.F.R. 71.6 (c) (5) (iii) (B)]
24, 24.1, 24.2, 24.3, 24.4	**NSPS Subpart A Performance (Source) Tests.** Conduct source tests according to Section 6 and as required in this condition on any affected facility. 24.1. Except as specified in paragraphs (a)(1),(a)(2), (a)(3), and (a)(4) of 40 CFR 60.8, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, or at such other times specified by 40 CFR Part 60, and at such other times as may be required by the Administrator, the Permittee shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s). 24.2. Tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. 24.3. Tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard. 24.4. Provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the Permittee shall notify the Administrator as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator by mutual agreement.	Continuous	HSE Records Review
24.5, 24.6	24.5. Provide or cause to be provided, performance testing facilities as follows: a. Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures. b. Safe sampling platform(s), c. Safe access to sampling platform(s), and d. Utilities for sampling and testing equipment. 24.6. Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.	Continuous	HSE Records Review
25	**NSPS Subpart A Good Air Pollution Control Practice.** At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU IDs 3, 4, 28, and 29 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU IDs 3, 4, 28, and 29.	Continuous	HSE Records Review
26	**NSPS Subpart A Credible Evidence.** For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 28, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 3, 4, 28, and 29 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
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 Conditions 28 and 29. 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.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
Subpart Dc			
28, 28.1, 28.2, 28.3, 28.4, 28.5	**NSPS Subpart Dc Applicability.** For EU IDs 3, 4, 28, and 29, comply with the following applicable requirements of NSPS Subpart Dc. **NSPS Subpart Dc Sulfur Dioxide and Particulate Matter Standards** 28.1. For EU IDs 3 and 4, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. 28.2. Compliance with the fuel oil sulfur limits under Condition 28.1 may be determined based on a certification from the fuel supplier, as described under Condition 28.12, as applicable. 28.3. The fuel oil sulfur limit in Condition 28.1 applies at all times, including periods of startup, shutdown, and malfunction. 28.4. For EU IDs 3 and 4, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. 28.5. The opacity standard under Condition 28.4 applies at all times, except during periods of startup, shutdown, or malfunction.	Continuous	HSE Records Review
28.6	**NSPS Subpart Dc Compliance and Performance Test Methods and Procedures** 28.6. The owner or operator of an affected facility subject to the opacity standard under Condition 28.4 shall conduct performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods. a. Method 9 of appendix A-4 of 40 CFR 60 shall be used for determining the opacity of stack emissions.	Continuous	HSE Records Review

Permit Condition		Compliance Status	Method Used to Determine Status
No(s).	Summary/Description		[40 C.F.R. 71.6 (c) (5) (iii) (B)]
28.7, 28.7a	**NSPS Subpart Dc Emission Monitoring for Particulate Matter** 28.7. The owner or operator of an affected facility shall comply with either Condition 28.7.a, 28.7.b, or 28.7.c. The observation period for Method 9 of appendix A-4 of 40 CFR 60 performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation. a. Except as provided in Conditions 28.7.b and 28.7.c, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of 40 CFR 60 performance tests using the procedures in Condition 28.7 according to the applicable schedule in Conditions 28.7.a(i) through 28.7.a(iv), as determined by the most recent Method 9 of appendix A-4 of 40 CFR 60 performance test results. (i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of 40 CFR 60 performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; (ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of 40 CFR 60 performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; (iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of 40 CFR 60 performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or (iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of 40 CFR 60 performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.	Continuous	HSE Records Review Field Operating Records Review
28.7b, 28.7c	b. If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of 40 CFR 60 performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of 40 CFR 60 performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of 40 CFR 60 according to the procedures specified in Conditions 28.7.b(i) and 28.7.b(ii). (i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of 40 CFR 60 and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (i.e., 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (i.e., 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (i.e., 90 seconds) or conduct a new Method 9 of appendix A-4 of 40 CFR 60 performance test using the procedures in Condition 28.7 within 45 calendar days according to the requirements in Condition 28.6.a. (ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed. c. If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of 40 CFR 60 performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in Condition 28.7.b. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.	Continuous	HSE Records Review
28.8, 28.9, 28.10	**NSPS Subpart Dc Reporting and Recordkeeping Requirements** 28.8. The owner or operator of each affected facility subject to the opacity limits of Condition 28.4 shall submit to the Administrator the performance test data from the initial and any subsequent performance tests. 28.9. In addition to the applicable requirements in 40 CFR 60.7, the owner or operator of an affected facility subject to the opacity limits in Condition 28.4 shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in Conditions 28.9.a through 28.9.c, as applicable to the visible emissions monitoring method used. a. For each performance test conducted using Method 9 of appendix A-4 of 40 CFR 60, the owner or operator shall keep the records including the information specified in Conditions 28.9.a(i) through 28.9.a(iii). (i) Dates and time intervals of all opacity observation periods; (ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and (iii) Copies of all visible emission observer opacity field data sheets; b. For each performance test conducted using Method 22 of appendix A-4 of 40 CFR 60, the owner or operator shall keep the records including the information specified in Conditions 28.9.b(i) through 28.9.b(iv). (i) Dates and time intervals of all visible emissions observation periods; (ii) Name and affiliation for each visible emission observer participating in the performance test; (iii) Copies of all visible emission observer opacity field data sheets; and (iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements. c. For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator. 28.10. The owner or operator of each affected facility subject to the fuel oil sulfur limits under Condition 28.1 shall submit reports to the Administrator.	Continuous	HSE Records Review

Permit Condition		Compliance Status	Method Used to Determine Status
No(s).	Summary/Description		[40 C.F.R. 71.6 (c) (5) (iii) (B)]
28.11, 28.12, 28.13, 28.14, 28.15, 28.16	28.11. The owner or operator of each affected facility subject to the fuel oil sulfur limits under Condition 28.1 shall keep records and submit reports as required under Condition 28.10, including the following information, as applicable. a. Calendar dates covered in the reporting period. b. If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under Condition 28.12.a. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period. 28.12. Fuel supplier certification shall include the following information: a. For distillate oil: (i) The name of the oil supplier; (ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c; and (iii) The sulfur content or maximum sulfur content of the oil. 28.13. For EU IDs 3, 4, 28, and 29, except as provided under Conditions 28.14 and 28.15, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day. 28.14. As an alternative to meeting the requirements of Condition 28.13, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in Condition 28.12 to demonstrate compliance with the SO2 standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month. 28.15. As an alternative to meeting the requirements of Condition 28.13, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to NSPS Subpart Dc) at that property are natural gas, wood, distillate oil meeting the most current requirements in 40 CFR 60.42c to use fuel certification to demonstrate compliance with the SO2 standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month. 28.16. The reporting period for the reports required under NSPS Subpart Dc is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.	Intermittent Compliance	HSE Records Review Field Operating Records Review
Subpart IIII			
29, 29.1, 29.2, 29.3	**NSPS Subpart IIII Applicability.** For EU IDs 39 and 42 through 46, comply with the following applicable requirements of NSPS Subpart IIII. **NSPS Subpart IIII Emission Standards** 29.1. For EU IDs 42 through 46, comply with the following emission standards: a. NMHC + NOx: 6.4 g/kW-hr b. CO: 3.5 g/kW-hr c. PM: 0.20 g/kW-hr 29.2. For EU ID 39, comply with the following emission standards: a. NMHC + NOx: 4.0 g/kW-hr b. CO: 3.5 g/kW-hr c. PM: 0.20 g/kW-hr 29.3. Operate and maintain stationary CI ICE that achieve the emission standards as required in Conditions 29.1 and 29.2 over the entire life of the engine.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
29.4	**NSPS Subpart IIII Fuel Requirements** 29.4. Owners and operators of stationary CI ICE that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
29.5, 29.6, 29.7, 29.8	**NSPS Subpart IIII Compliance Requirements** 29.5. You must do all of the following, except as permitted under Condition 29.7: a. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; b. Change only those emission-related settings that are permitted by the manufacturer; and c. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you. 29.6. You must comply with the emission standards in Conditions 29.1 and 29.2 by purchasing an engine certified to the emission standards in Conditions 29.1 and 29.2. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in Condition 29.7. 29.7. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows: a. For EU ID 39, 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. b. For EU IDs 42 through 46, 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. **NSPS Subpart IIII Testing Requirements** 29.8. Owners and operators who conduct performance tests pursuant to NSPS Subpart IIII must do so according to paragraphs (a) through (e) of 40 CFR 60.4212.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants Subpart A & M			
30	Comply with the applicable requirements set forth in 40 CFR 61.145, 61.146, 61.148, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 CFR 61, Subpart A and Appendix A.	Continuous	HSE Records Review
40 CFR Part 63 National Emission Standards for Hazardous Air Pollutants Subpart A			
31	For EU ID 52, comply with the applicable requirements of 40 CFR 63 Subpart A in accordance with the provisions for applicability of Subpart A in Subpart JJJJJJ, Table 8.	Continuous	HSE Records Review
Subpart ZZZZ			
32	**NESHAP Subpart ZZZZ Applicability.** For EU IDs 17, 22, 30, 35, 39, and 42 through 46, comply with the following applicable requirements of NESHAP Subpart ZZZZ. 32.1. For EU IDs 39 and 42 through 46, meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR part 60 Subpart IIII. No further requirements apply for such engines under 40 CFR 63. 32.2. For EU IDs 17, 22, 30, and 35, the emergency stationary RICE listed in Condition 32.2.a are not subject to NESHAP Subpart ZZZZ. The stationary RICE must meet the definition of an emergency stationary RICE in 40 CFR 63.6675, which includes operating according to the provisions specified in 40 CFR 63.6640(f). a. Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate to supply power as part of a financial arrangement with another entity.	Continuous	HSE Records Review

Permit Condition		Compliance Status	Method Used to Determine Status
No(s).	Summary/Description		[40 C.F.R. 71.6 (c) (5) (iii) (B)]
Subpart JJJJJJ			
33, 33.1, 33.2, 33.3a	**NESHAP Subpart JJJJJJ Applicability.** For EU IDs 1 through 4, 28, 29, and 52, comply with the following applicable requirements of NESHAP Subpart JJJJJJ. **Subpart JJJJJJ Work Practice Standards and Management Practices** 33.1. For EU ID 52, comply with the following: a. Conduct a tune-up of the boiler every 5 years as specified in Condition 33.3.b. **Subpart JJJJJJ General Compliance Requirements** 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 that 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. **Subpart JJJJJJ Initial Compliance Requirements** 33.2. For EU IDs 1 through 4, 28, 29, and 52, comply with the following: a. For affected boilers that switch fuels or make a physical change to the boiler that results in the applicability of a different subcategory within Subpart JJJJJJ or the boiler becoming subject to Subpart JJJJJJ, you must demonstrate compliance within 180 days of the effective date of the fuel switch or the physical change. Notification of such changes must be submitted according to Condition 33.3.f. **Subpart JJJJJJ Continuous Compliance Requirements** 33.3. For EU ID 52, comply with the following: a. For affected sources subject to the work practice standard or the management practices of a tune-up, you must conduct a performance tune-up according to Condition 33.3.b and keep records as required in Condition 33.3.d to demonstrate continuous compliance. You must conduct the tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.	Continuous	HSE Records Review
33.3b	b. You must conduct a tune-up of the boiler every 5 years to demonstrate continuous compliance as specified in Conditions 33.3.b(i) through 33.3.b(vii). Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. (i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, not to exceed 72 months from the previous inspection). (ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. (iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown, not to exceed 72 months from the previous inspection). (iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available. (v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. (vi) Maintain on-site and submit, if requested by the Administrator, a report containing the information in Conditions 33.3.b(vi)(A) through (). (A) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler. (B) A description of any corrective actions taken as a part of the tune-up of the boiler. (vii) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
33.3c	**Subpart JJJJJJ Notification, Reporting, and Recordkeeping Requirements** c. You must prepare, by March 1, and submit to the delegated authority upon request, a 5-year compliance certification report as specified in Conditions 33.3.c(i) and 33.3.c(ii). A report must be prepared in 2019 and every five years thereafter. (i) Company name and address. (ii) Statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart. Your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official: (A) "This facility complies with the requirements in §63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler." (B) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit."	Continuous	Records Review
33.3d, 33.3e	d. You must maintain the records specified in Conditions 33.3.d(i) through 33.3.d(iv). (i) As required in 40 CFR 63.10(b)(2)(xiv), you must keep a copy of each notification and report that you submitted to comply with NESHAP Subpart JJJJJJ and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted. (ii) You must keep records to document conformance with the work practices and management practices required by Condition 33.3.b as specified in Condition 33.3.d(ii)(A). (A) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned. (iii) Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment. (iv) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in Condition 33.1.b, including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation. e. Your records must be in a form suitable and readily available for expeditious review. You must keep each record for 5 years following the date of each recorded action. You must keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. You may keep the records off site for the remaining 3 years.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
33.3f	f. If you have switched fuels or made a physical change to the boiler and the fuel switch or change resulted in the applicability of a different subcategory within this subpart, in the boiler becoming subject to this subpart, or in the boiler switching out of this subpart due to a fuel change that results in the boiler meeting the definition of gas-fired boiler, as defined in 40 CFR 63.11237, or you have taken a permit limit that resulted in you becoming subject to this subpart or no longer being subject to this subpart, you must provide notice of the date upon which you switched fuels, made the physical change, or took a permit limit within 30 days of the change. The notification must identify: (i) The name of the owner or operator of the affected source, the location of the source, the boiler(s) that have switched fuels, were physically changed, or took a permit limit, and the date of the notice. (ii) The date upon which the fuel switch, physical change, or permit limit occurred.	Continuous	HSE Records Review Field Operating/Maintenance Records Review
40 CFR Part 82 Protection of Stratospheric Ozone			
34, 35, 36	34. **Subpart F – Recycling and Emissions Reduction.** Comply with the applicable standards for recycling and emission reduction of refrigerants in 40 CFR 82 Subpart F. 35. **Subpart G – Significant New Alternatives.** Comply with the applicable prohibitions in 40 CFR 82.174. 36. **Subpart H – Halons Emissions Reduction.** Comply with the applicable prohibitions in 40 CFR 82.270.	Continuous	Field Operating/Maintenance Records Review

Permit Condition		Compliance Status	Method Used to Determine Status
No(s).	Summary/Description		[40 C.F.R. 71.6 (c) (5) (iii) (B)]
General NSPS and NESHAP Requirements			
37, 38, 39	37. **NESHAP Applicability Determinations.** Determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 CFR 63) in accordance with the procedures in 40 CFR 63.1(b). 37.1. An owner or operator of a stationary source who is in the relevant source category and who determines that the source is not subject to a relevant standard or other requirement established under 40 CFR 63 must keep a record as specified in 40 CFR 63.10(b)(3). 38. If an existing source becomes affected by an applicable subpart of 40 CFR 63, the Permittee shall comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 CFR 63.6(c). 39. After the effective date of any relevant standard promulgated by the Administrator under 40 CFR 63, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator and the Department of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in 40 CFR 63.9(b).	Continuous	HSE Records Review
40, 41	40. **Reports**. Except for previously submitted reports and federal reports and notices submitted through EPA's Central Data Exchange (CDX) and Compliance and Emissions Data Reporting Interface (CEDRI) online reporting system, attach to the operating report required by Condition 70 for the period covered by the report, a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10. For reports previously submitted to ADEC or submitted through CDX/CEDRI, state in the operating report the date and a brief description of each of the reports submitted during the reporting period. 41. **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.	Continuous	HSE Records Review
Section 5. General Conditions			
Standard Terms and Conditions			
42	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.	Continuous	Advisory Provision
43	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.	Continuous	Advisory Provision
44	The permit does not convey any property rights of any sort, nor any exclusive privilege.	Continuous	Advisory Provision
45	**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.	Continuous	HSE Records Review Accounting Records
46	**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 46.1. the stationary source's assessable potential to emit of 234 tpy; or 46.2. 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.	Continuous	HSE Records Review Accounting Records
47	**Assessable Emission Estimates.** Emission fees will be assessed as follows: 47.1. 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 47.2. 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 46.1.	Continuous	HSE Records Review
48, 49, 50, 51	48. **Good Air Pollution Control Practice.** The Permittee shall do the following for EU IDs 1, 2, 17, 22, 27, 30, 35, 69, and 70: 48.1. perform regular maintenance considering the manufacturer's or the operator's maintenance procedures; 48.2. keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and 48.3. keep a copy of either the manufacturer's or the operator's maintenance procedures. 49. **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. 50. **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. 50.1. 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 50.1.a or to address the results of Department inspections that found potential problems; and (ii) to prevent future dust problems. 50.2. The Permittee shall report according to Condition 52. 51. **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.	Continuous	.

Permit Condition		Compliance Status	Method Used to Determine Status
No(s).	Summary/Description		[40 C.F.R. 71.6 (c) (5) (iii) (B)]
52	**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. 52.1. Monitoring, Recordkeeping, and Reporting for Condition 52: a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 69. 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 52. 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 52; or (ii) the Department notifies the Permittee that it has found a violation of Condition 52. 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 52; 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 70, 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.	Continuous	:
53	**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 listed in Condition 28, 29, or 34 (refrigerants), 53.1. take all reasonable steps to minimize levels of emissions that exceed the standard, and 53.2. report in accordance with Condition 69; the report must include information on the steps taken to mitigate emissions and corrective measures taken or to be taken.	Continuous	HSE Records Review
Open Burning Requirements			
54	**Open Burning.** If open burning is conducted at this stationary source, comply with the requirements of 18 AAC 50.065. 54.1. Keep written records to demonstrate compliance with the limitations in this condition and the requirements of 18 AAC 50.065. Submit copies of the records to the Department upon request. 54.2. Include this condition in the annual certification required under Condition 71.	Continuous	HSE Records Review
Section 6. General Source Testing and Monitoring Requirements			
55	**Requested Source Tests.** In addition to any emission unit testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.	Continuous	HSE Records Review
56	**Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, conduct source testing 56.1 at a point or points that characterize the actual discharge into the ambient air; and 56.2 at the maximum rated burning or operating capacity of the emission unit or another rate determined by the Department to characterize the actual discharge into the ambient air.	Continuous	HSE Records Review
57	**Reference Test Methods.** Use the following test methods when conducting source testing for compliance with this permit: 57.1. 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. 57.2. 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. 57.3. 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. 57.4. 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. 57.5. 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. 57.6. Source testing for emissions of PM2.5 and PM10 must be conducted in accordance with the procedures specified in 40 CFR 51, Appendix M, Methods 201 or 201A and 202. 57.7. 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.	Continuous	HSE Records Review
58	**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).	Continuous	HSE Records Review
59, 60, 61, 62, 63	59. **Test Exemption.** Compliance with Conditions 61, 62 and 63 is not required for Method 9 Plan (Condition 2.2) observations. 60. **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. 61. **Test Plans.** Except as provided in Condition 59, 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 55 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. 62. **Test Notification.** Except as provided in Condition 59, 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. 63. **Test Reports.** Except as provided in Condition 59, 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 66. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.	Continuous	HSE Records Review
64	**Particulate Matter Calculations.** In source testing for compliance with the particulate matter standards in Conditions 5 and 21.2, the three-hour average is determined using the average of three one-hour test runs.	Continuous	HSE Records Review

Permit Condition		Compliance Status	Method Used to Determine Status
No(s).	Summary/Description		[40 C.F.R. 71.6 (c) (5) (iii) (B)]
Section 7. General Recordkeeping and Reporting Requirements			
Recordkeeping Requirements			
65	Keep all records required by this permit for at least five years after the date of collection, including: 65.1. Copies of all reports and certifications submitted pursuant to this section of the permit; and 65.2. Records of all monitoring required by this permit, and information about the monitoring including: a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation; b. the date, place, and time of sampling or measurements; c. the date(s) analyses were performed; d. the company or entity that performed the analyses; e. the analytical techniques or methods used; f. the results of such analyses; and, g. the operating conditions as existing at the time of sampling or measurement.	Continuous	HSE Records Review
Reporting Requirements			
66	**Certification.** 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. 66.1. 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 66.1.a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.	Continuous	HSE Records Review
67	**Submittals.** Unless otherwise directed by the Department or this permit, 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. Submit the documents either by hard copy or electronically. 67.1. Provide electronic submittals, either by: a. email 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/.	Continuous	HSE Records Review
68	**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.	Continuous	HSE Records Review
69	**Excess Emissions and Permit Deviation Reports.** 69.1. Except as provided in Condition 52, 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 69.1.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 69.1.c(i); and (iii) for failure to monitor, as required in other applicable conditions of this permit. 69.2. 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. 69.3. If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.	Continuous	HSE Records Review
70, 70.1	**Operating Reports.** During the life of this permit, 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. 70.1. 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.	Continuous	HSE Records Review
70.2, 70.3	70.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 70.1, 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 70.3. when excess emissions or permit deviations have already been reported under Condition 69 the Permittee shall cite the date or dates of those reports.	Continuous	HSE Records Review
70.4, 70.5	70.4. The operating report must include, for the period covered by the report, a listing of emissions monitored under Conditions 2.2.e which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report. a. the date of the emissions; b. the equipment involved; c. the permit condition affected; and d. the monitoring result which triggered the additional monitoring. 70.5. 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.	Continuous	HSE Records Review
71	**Annual Compliance Certification.** Each year by March 31, compile and submit to the Department an annual compliance certification report according to Condition 67. 71.1. 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; 71.2. **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. 71.3. In addition, submit a copy of the report directly to the Clean Air Act Compliance Manager, US EPA Region 10, Mail Stop: OCE-101, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101.	Continuous	HSE Records Review

Permit Condition		Compliance Status	Method Used to Determine Status
No(s).	Summary/Description		[40 C.F.R. 71.6 (c) (5) (iii) (B)]
72	**Emission Inventory Reporting.** The Permittee shall submit to the Department reports of actual emissions, by emissions unit, of CO, NH3, NOx, PM10, PM2.5, SO2, VOCs and lead (Pb) (and lead compounds) using the form in Section 14 of this permit, as follows: 72.1. 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 NH3, PM10, PM2.5 or VOCs; or b. 2,500 tpy of CO, NOx or SO2. 72.2. 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 SO2, NH3, PM10, PM2.5, NOx or VOCs. 72.3. For reporting under Condition 72.2, 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. 72.4. 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.	Continuous	HSE Records Review
Section 8. Permit Changes and Renewal			
73	**Permit Applications and Submittals.** Comply with the following requirements for submitting application information to the US Environmental Protection Agency (EPA): 73.1. 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; 73.2. The information shall be submitted to the Part 70 Operating Permit Program, US EPA Region 10, Mail Stop: OAW-150, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101. 73.3. To the extent practicable, provide applications in portable document format (pdf); MS Word format (.doc); or other computer-readable format compatible with EPA's national database management system; and 73.4. Maintain records as necessary to demonstrate compliance with this condition.	Continuous	HSE Records Review
74	**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.	Continuous	Advisory Provision
75	**Off Permit Changes.** Changes that are not addressed or prohibited by this permit, other than those subject to the requirements of 40 CFR Part 72 through 78 or those that are modifications under any provision of Title I of the Act, may be made without a permit revision, provided that the following requirements are met: 75.1. Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition; 75.2. 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; 75.3. The change shall not qualify for the shield under 40 CFR 71.6(f); 75.4. Keep a record describing changes made at the stationary source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.	Continuous	HSE Records Review
76	**Operational Flexibility.** CAA Section 502(b)(10) changes may be made within the permitted stationary source without a permit revision, if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions): Provided, that the Permittee provides EPA and the Department with written notification no less than seven days in advance of the proposed change. 76.1. For each such change, the notification required by Condition 76 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. 76.2. The permit shield described in 40 CFR 71.6(f) shall not apply to any change made pursuant to Condition 76.	Continuous	HSE Records Review
77	**Permit Renewal.** To renew this permit, the Permittee shall submit to the Department an application under 18 AAC 50.326 no sooner than April 23, 2023 and no later than April 23, 2024. The renewal application must be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 CFR 71.7(b) and 71.5(a)(1)(iii).	Continuous	HSE Records Review
Section 9. Compliance Requirements			
General Compliance Requirements			
78	Compliance with permit terms and conditions is considered to be compliance with those requirements that are 78.1. included and specifically identified in the permit; or 78.2. determined in writing in the permit to be inapplicable.	Continuous	Advisory Provision
79	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 79.1. an enforcement action; 79.2. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or 79.3. denial of an operating permit renewal application.	Continuous	Advisory Provision
80, 81	80. For applicable requirements with which the stationary source is in compliance, the Permittee shall continue to comply with such requirements. 81. 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.	Continuous	Advisory Provision
82	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 82.1. enter upon the premises where a source subject to the permit is located or where records required by the permit are kept; 82.2. have access to and copy any records required by the permit; 82.3. inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and 82.4. sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.	Continuous	Advisory Provision
83	For applicable requirements that will become effective during the permit term, the Permittee shall meet such requirements on a timely basis.	Continuous	Advisory Provision

Appendix B Emission Units

Application for Renewal of an Air Quality Operating Permit

Providence Alaska Medical Center

Providence Health System – Washington Inc.

SLR Project No.: 105.00541.23001

January 8, 2024

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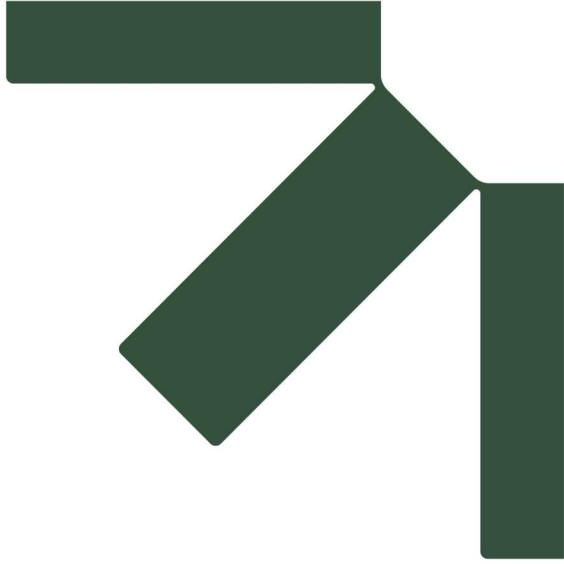

B.1 Form B: Emission Unit Listing for This Application

B.2 Form B1: Emission Unit Detail Form – External Combustion Equipment

B.3 Form B2: Emission Unit Detail Form – Internal Combustion Equipment

B.4 Form B4: Emission Unit Detail Form – Volatile Liquid Storage Tanks

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FORM B
Emission Unit Listing For This Application

Permit Number: AQ0486TVP03

EMISSION UNIT LISTING: New, Modified, Previously Unpermitted, Replaced, Deleted					
Emission Unit ID Number	Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date	Notes
Emission Units To Be ADDED By This Application (New, Previously Unpermitted, or Replacement)					
N/A	Hot Water Heater 1	Bldg. PRB water heater	1.0MMBtu/hr	2023	18 AAC 50.326(g)(5)
N/A	Hot Water Heater 2	Bldg. PRB backup water heater	1.0MMBtu/hr	2023	18 AAC 50.326(g)(5)
Emission Units To Be MODIFIED By This Application					
3	SB-05	Nebraska Steam Boiler	49.0 MMBtu/hr	1990	Corrected Construction Date
69	EPSS Storage Tank 1	Distillate Storage Tank	45,000 gal	Unknown	Reclassified as IEU
70	EPSS Storage Tank 2	Distillate Storage Tank	45,000 gal	Unknown	Reclassified as IEU
Emission Units To Be DELETED By This Application					
37	Dom Hot Water Heater	Water Heater	1.0 MMBtu/hr	Unknown	Replaced with 2 hot water heaters listed above
27	Unknown	Distillate Storage Tank	19,800 gallons	1992	Reclassified as IEU
46	EPSS-5	CAT D3516C EPSS Generator 5	2,937 hp	2011	PAMC does not plan to purchase and install this unit.

FORM B

Emission Unit Listing For This Application

SIGNIFICANT EMISSION UNIT LISTING: Title V permitted emission units that have not been modified				
Emission Unit ID Number	Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date
1	SB-03	E. Keller Steam Boiler	38.5 MMBtu/hr	1974
2	SB-04	E. Keller Steam Boiler	38.5 MMBtu/hr	1974
4	SB-06	Cleaver Brooks Steam Boiler	42.2 MMBtu/hr	2000
17	G-201	Cummins Emergency Generator Engine	300 kW	1990
22	G-301	Komatsu Emergency Generator Engine	450 kW	1992
28	B-1	Bryan MOB Hub Boiler 1	12.6 MMBtu/hr	2006
29	B-2	Bryan MOB Hub Boiler 2	12.6 MMBtu/hr	2006
30	G-1	Cummins Emergency Generator Engine	680 hp	2005
35	API-3	Cummins PRB Emergency Generator Engine	1,046 hp	2005
39	G-2	Cummins QSB7-G3 Tower S Emergency Generator Engine	680 hp	2009
42	EPSS-1	CAT D3516C EPSS Generator 1	2,937 hp	2011
43	EPSS-2	CAT D3516C EPSS Generator 2	2,937 hp	2011
44	EPSS-3	CAT D3516C EPSS Generator 3	2,937 hp	2011
45	EPSS-4	CAT D3516C EPSS Generator 4	2,937 hp	2011
52	N/A	Weil McLain Boiler	0.872 MMBtu/hr	2011

FORM B

Emission Unit Listing For This Application

INSIGNIFICANT EMISSION UNIT LISTING: Insignificant Title V permitted emission units that have not been modified				
Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date	Basis for Insignificant Status
Space Heater	Heater	0.175 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Space Heater	Heater	0.175 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Supply Fan/Space Heater	Heater	0.25 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building A Boiler 1	Boiler	2.0 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building A Boiler 2	Boiler	2.0 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building A Boiler 3	Boiler	2.0 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
T Building Boiler 5	Boiler	2.0 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
T Building Boiler 6	Boiler	2.0 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
PRB Boiler 1	Boiler	2.0 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
PRB Boiler 2	Boiler	2.0 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
PRB Boiler 3	Boiler	2.0 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Hydronic Boiler 1	Boiler	0.175 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Hydronic Boiler 2	Boiler	0.175 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building K Boiler	Boiler	0.970 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building X Rooftop Heating Unit 1	Heater	0.125 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building X Rooftop Heating Unit 2	Heater	0.125 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building X Rooftop Heating Unit 3	Heater	0.125 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building X Rooftop Heating Unit 4	Heater	0.125 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building X Rooftop Heating Unit 5	Heater	0.125 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building X Rooftop Heating Unit 6	Heater	0.125 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building U Humidifier	Humidifier	0.3 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building S Boiler 1	Boiler	2.0 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building S Boiler 2	Boiler	2.0 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)

Building S Humidifier	Humidifier	0.055 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building HH Boiler	Boiler	2.0 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building B Boiler 1	Boiler	0.29 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Building B Boiler 2	Boiler	0.29 MMBtu/hr	Unknown	18 AAC 50.326(g)(5)
Diesel Storage Tank	Tank	1,000 gallons	Unknown	18 AAC 50.326(e)
201 Underground Storage Tank	Tank	2,000 gallons	Unknown	18 AAC 50.326(e)

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit Number: AQ0486TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 1
2.	Date installation/construction commenced	1974
3.	Date installed	1974
4.	Emission Unit serial number	15748-1
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	E. Keller
7.	Description of emission unit, including type of boiler/heater and firing method: Dual fuel steam boilers	
8.	Rated design capacity (heat input, MMBtu/hr)	38.5 MMBtu/hr, each
9.	Maximum steam production rate (lbs/hr)	27,500 lb/hr, each
10.	Maximum steam pressure (psi)	
11.	Maximum steam temperature (°F)	

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Natural Gas	38.5 Mscf/hr, each
Diesel	281 gal/hr, each

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 1	18 AAC 50.055(a)(1)	Industrial Process and Fuel-Burning Equipment Visible Emissions	The Permittee shall not cause or allow visible emissions, excluding condensed water vapor to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Condition 1.5, and 9 through 12.
AQ0486TVP03 – Condition 5	18 AAC 50.055(b)(1)	Industrial Process and Fuel-Burning Equipment Particulate Matter	The Permittee shall not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Condition 5.5 and 12.
AQ0486TVP03 – Condition 13	18 AAC 50.055(c)	Sulfur Compound Emissions	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. Monitor, record, and report in accordance with Conditions 13.1, and 13.3 through 13.5.
AQ0486TVP03 – Condition 15	Minor Permit No. AQ0486MSS01 – Condition 7	Boiler Distillate Oil Limits	Limit the combined distillate fuel oil burned in EU IDs 1 through 4 to no more than 500,000 gallons in any 12 consecutive month period.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.4.
AQ0486TVP03 – Condition 16	Minor Permit No. AQ0486MSS01 – Condition 8	Boiler Natural Gas Limits	Limit the combined natural gas burned in EU IDs 1 through 4, 28 and 29 to no more than 1,000 million standard cubic feet in any 12 consecutive month period.	Yes	Monitor, record, and report in accordance with Conditions 16.1 through 16.4.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 17.1	Minor Permit No. AQ0486MSS01 – Condition 9.1	Boiler Sulfur Limits	Limit the sulfur content of distillate fuel consumed to no greater than 0.5 percent by weight.	Yes	Monitor, record, and report in accordance with Conditions 17.3, 17.5 and 17.6.
AQ0486TVP03 – Condition 17.2	Minor Permit No. AQ0486MSS01 – Condition 9.2	Boiler Sulfur Limits	Burn pipeline quality natural gas with a sulfur content not to exceed 12 grains per 100 standard cubic feet.	Yes	Monitor, record, and report in accordance with Conditions 17.4 through and 17.6.
AQ0486TVP03 – Condition 18, 18.1a	Minor Permit No. AQ0486MSS01 – Condition 6.1a(ii)	Ambient Air Quality Protection Requirements	Maintain the exhaust stack of EU ID 1 as a vertical release without a rain cap whenever EU ID 1 is operating. Exhaust stack of EU ID 1 may be covered when EU ID 1 is not operating.	Yes	Reasonable inquiry.
AQ0486TVP03 Conditions 33 and 33.2	40 CFR 63.11193 & 63.11195(e), Subpart JJJJJJ	NESHAP Subpart JJJJJJ Applicability	If either boiler switches fuel or makes a physical change that results in the applicability of a different subcategory within Subpart JJJJJJ, or becomes subject to Subpart JJJJJJ, demonstrate compliance within 180 days of the effective date of the fuel switch or physical change.	Yes	Maintain records in accordance with Condition 33.3f.
AQ0486TVP03 Conditions 48 and 48.1	18 AAC 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall do the following: - perform regular maintenance considering the manufacturer's or the operator's maintenance procedures.	Yes	Maintain records in accordance with Conditions 48.2 and 48.3.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 63 Subpart JJJJJJ	These units are exempt from Subpart JJJJJJ because they only fire natural gas, or fire diesel no more than 48 hours per year.
40 CFR 60 Subpart Dc §§60.42c(a) through (c), and §§60.43c(a) and (b)	These units do not burn coal or wood.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit Number: AQ0486TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 2
2.	Date installation/construction commenced	1974
3.	Date installed	1974
4.	Emission Unit serial number	15748-2
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	E. Keller
7.	Description of emission unit, including type of boiler/heater and firing method: Dual fuel steam boilers	
8.	Rated design capacity (heat input, MMBtu/hr)	38.5 MMBtu/hr, each
9.	Maximum steam production rate (lbs/hr)	27,500 lb/hr, each
10.	Maximum steam pressure (psi)	
11.	Maximum steam temperature (°F)	

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Natural Gas	38.5 Mscf/hr, each
Diesel	281 gal/hr, each

13.	Is waste heat utilized for any purpose? If yes, describe: No.

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 1	18 AAC 50.055(a)(1)	Industrial Process and Fuel-Burning Equipment Visible Emissions	The Permittee shall not cause or allow visible emissions, excluding condensed water vapor to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Condition 1.5, and 9 through 12.
AQ0486TVP03 – Condition 5	18 AAC 50.055(b)(1)	Industrial Process and Fuel-Burning Equipment Particulate Matter	The Permittee shall not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Condition 5.5 and 12.
AQ0486TVP03 – Condition 13	18 AAC 50.055(c)	Sulfur Compound Emissions	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. Monitor, record, and report in accordance with Conditions 13.1, and 13.3 through 13.5.
AQ0486TVP03 – Condition 15	Minor Permit No. AQ0486MSS01 Condition 7	Boiler Distillate Oil Limits	Limit the combined distillate fuel oil burned in EU IDs 1 through 4 to no more than 500,000 gallons in any 12 consecutive month period.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.4.
AQ0486TVP03 – Condition 16	Minor Permit No. AQ0486MSS01 Condition 8	Boiler Natural Gas Limits	Limit the combined natural gas burned in EU IDs 1 through 4, 28 and 29 to no more than 1,000 million standard cubic feet in any 12 consecutive month period.	Yes	Monitor, record, and report in accordance with Conditions 16.1 through 16.4.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 17.1	Minor Permit No. AQ0486MSS01 – Condition 9.1	Boiler Sulfur Limits	Limit the sulfur content of distillate fuel consumed to no greater than 0.5 percent by weight.	Yes	Monitor, record, and report in accordance with Conditions 17.3, 17.5 and 17.6.
AQ0486TVP03 – Condition 17.2	Minor Permit No. AQ0486MSS01 – Condition 9.2	Boiler Sulfur Limits	Burn pipeline quality natural gas with a sulfur content not to exceed 12 grains per 100 standard cubic feet.	Yes	Monitor, record, and report in accordance with Conditions 17.4 through and 17.6.
AQ0486TVP03 – Condition 18, 18.1a	Minor Permit No. AQ0486MSS01 – Condition 6.1a(ii)	Ambient Air Quality Protection Requirements	Maintain the exhaust stack of EU ID 1 as a vertical release without a rain cap whenever EU ID 1 is operating. Exhaust stack of EU ID 1 may be covered when EU ID 1 is not operating.	Yes	Reasonable inquiry.
AQ0486TVP03 – Conditions 33 and 33.2	40 CFR 63.11193 & 63.11195(e), Subpart JJJJJJ	NESHAP Subpart JJJJJJ Applicability	If either boiler switches fuel or makes a physical change that results in the applicability of a different subcategory within Subpart JJJJJJ, or becomes subject to Subpart JJJJJJ, demonstrate compliance within 180 days of the effective date of the fuel switch or physical change.	Yes	Maintain records in accordance with Condition 33.3f.
AQ0486TVP03 – Conditions 48 and 48.1	18 AAC 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall do the following: - perform regular maintenance considering the manufacturer's or the operator's maintenance procedures.	Yes	Maintain records in accordance with Conditions 48.2 and 48.3.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 63 Subpart JJJJJJ	These units are exempt from Subpart JJJJJJ because they only fire natural gas, or fire diesel no more than 48 hours per year.
40 CFR 60 Subpart Dc §§60.42c(a) through (c), and §§60.43c(a) and (b)	These units do not burn coal or wood.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit Number: AQ0486TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 3
2.	Date installation/construction commenced	1990
3.	Date installed	1999
4.	Emission Unit serial number	D-2672
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Nebraska Boiler
7.	Description of emission unit, including type of boiler/heater and firing method: Dual fuel steam boiler	
8.	Rated design capacity (heat input, MMBtu/hr)	49.0 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	35,000 lb/hr
10.	Maximum steam pressure (psi)	
11.	Maximum steam temperature (°F)	

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Natural Gas	49 Mscf/hr
Diesel	357.7 gal/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No.

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 1	18 AAC 50.055(a)(1)	Industrial Process and Fuel-Burning Equipment Visible Emissions	The Permittee shall not cause or allow visible emissions, excluding condensed water vapor to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Condition 1.5, and 9 through 12.
AQ0486TVP03 – Condition 5	18 AAC 50.055(b)(1)	Industrial Process and Fuel-Burning Equipment Particulate Matter	The Permittee shall not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Condition 5.5 and 12.
AQ0486TVP03 – Condition 13	18 AAC 50.055(c)	Sulfur Compound Emissions	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. Monitor, record, and report in accordance with Conditions 13.1, and 13.3 through 13.5.
AQ0486TVP03 – Condition 15	Minor Permit No. AQ0486MSS01 Condition 7	Boiler Distillate Oil Limits	Limit the combined distillate fuel oil burned in EU IDs 1 through 4 to no more than 500,000 gallons in any 12 consecutive month period.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.4.
AQ0486TVP03 – Condition 16	Minor Permit No. AQ0486MSS01 Condition 8	Boiler Natural Gas Limits	Limit the combined natural gas burned in EU IDs 1 through 4, 28 and 29 to no more than 1,000 million standard cubic feet in any 12 consecutive month period.	Yes	Monitor, record, and report in accordance with Conditions 16.1 through 16.4.
AQ0486TVP03 – Condition 17.1	Minor Permit No. AQ0486MSS01 – Condition 9.1	Boiler Sulfur Limits	Limit the sulfur content of distillate fuel consumed to no greater than 0.5 percent by weight.	Yes	Monitor, record, and report in accordance with Conditions 17.3, 17.5 and 17.6.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 17.2	Minor Permit No. AQ0486MSS01 – Condition 9.2	Boiler Sulfur Limits	Burn pipeline quality natural gas with a sulfur content not to exceed 12 grains per 100 standard cubic feet.	Yes	Monitor, record, and report in accordance with Conditions 17.4 through and 17.6.
AQ0486TVP03 – Condition 23	40 CFR 60.7(b), Subpart A	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU ID 3, any malfunctions of associated air pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU ID 3 is inoperative.	Yes	Annual Compliance Certification.
AQ0486TVP03 – Condition 25	40 CFR 60.11(d), Subpart A	NSPS Subpart A Good Air Pollution Control Practice	At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU ID 3 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU ID 3.	Yes	Annual Compliance Certification.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 26	40 CFR 60.11(g), Subpart A	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 28 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether EU ID 3 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Annual Compliance Certification
AQ0486TVP03 – Conditions 27	40 CFR 60.12, Subpart A	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.	Yes	Annual Compliance Certification

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Conditions 28	40 CFR 60.48c(g) & (i), Subpart Dc	NSPS Subpart Dc Fuel Consumption	For EU ID 3, the Permittee shall record the amounts of each fuel combusted during each day and maintain the records for a period of two years following the date of such record; or monitor according to an EPA approved custom fuel-monitoring schedule. - As an alternative to meeting the requirements of Condition 28, the owner or operator of an affected facility that combusts only natural gas to demonstrate compliance with the SO_2 standard may elect to record and maintain records of the amount of each fuel combusted during each calendar month.	Yes	Annual Compliance Certification.
AQ0486TVP03 – Condition 28.1	40 CFR 60.42c(d) & (i), Subpart Dc	NSPS Subpart Dc Sulfur Standards	At all times, including periods of startup, shutdown, and malfunction, for EU ID 3, the Permittee shall combust fuel oil that contains no more than 0.5 percent sulfur by weight.	Yes	Monitor, record, and report in accordance with Conditions 28.2, 28.3, and 28.10 through 28.16.
AQ0486TVP03 – Condition 28.4	40 CFR 60.43c(c) & (d), Subpart Dc	NSPS Subpart Dc PM Standards	At all times while operating on diesel fuel, except during periods of startup, shutdown, and malfunction, the Permittee shall not cause to be discharged into the atmosphere from EU ID 3 any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.	Yes	Monitor, record, and report in accordance with Conditions 28.6 through 28.9.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Conditions 33 and 33.2	40 CFR 63.11193 & 63.11195(e), Subpart JJJJJJ	NESHAP Subpart JJJJJJ Applicability	If either boiler switches fuel or makes a physical change that results in the applicability of a different subcategory within Subpart JJJJJJ, or becomes subject to Subpart JJJJJJ, demonstrate compliance within 180 days of the effective date of the fuel switch or physical change.	Yes	Maintain records in accordance with Condition 33.3f.
AQ0486TVP03 – Condition 53	18 AAC 50.235(a), 50.326(j)(4), & 50.040(j)(4) 40 CFR 71.6(c)(6)	Technology-Based Emissions Standard	If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard listed in Condition 29, 30, or 33, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.	Yes	Annual Compliance Audit.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 63 Subpart JJJJJJ	These units are exempt from Subpart JJJJJJ because they only fire natural gas, or fire diesel no more than 48 hours per year.
40 CFR 60 Subpart Dc §§60.42c(a) through (c), and §§60.43c(a) and (b)	These units do not burn coal or wood.
40 CFR 60 Subpart Dc §§60.46c(a) through (d) and (f) and §§60.47c(a), (b) and (d) through (f)	These units do not burn coal or wood.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit Number: AQ0486TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 4
2.	Date installation/construction commenced	2000
3.	Date installed	2000
4.	Emission Unit serial number	D-4303
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Cleaver Brooks
7.	Description of emission unit, including type of boiler/heater and firing method: Dual fuel steam boiler	
8.	Rated design capacity (heat input, MMBtu/hr)	42.2 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	35,000 lb/hr
10.	Maximum steam pressure (psi)	280 psi
11.	Maximum steam temperature (°F)	

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Natural Gas	42.2 Mscf/hr
Diesel	308.0 gal/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No.

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 1	18 AAC 50.055(a)(1)	Industrial Process and Fuel-Burning Equipment Visible Emissions	The Permittee shall not cause or allow visible emissions, excluding condensed water vapor to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Condition 1.5, and 9 through 12.
AQ0486TVP03 – Condition 5	18 AAC 50.055(b)(1)	Industrial Process and Fuel-Burning Equipment Particulate Matter	The Permittee shall not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Condition 5.5 and 12.
AQ0486TVP03 – Condition 13	18 AAC 50.055(c)	Sulfur Compound Emissions	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. Monitor, record, and report in accordance with Conditions 13.1, and 13.3 through 13.5.
AQ0486TVP03 – Condition 15	Minor Permit No. AQ0486MSS01 Condition 7	Boiler Distillate Oil Limits	Limit the combined distillate fuel oil burned in EU IDs 1 through 4 to no more than 500,000 gallons in any 12 consecutive month period.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.5.
AQ0486TVP03 – Condition 16	Minor Permit No. AQ0486MSS01 Condition 8	Boiler Natural Gas Limits	Limit the combined natural gas burned in EU IDs 1 through 4, 28 and 29 to no more than 1,000 million standard cubic feet in any 12 consecutive month period.	Yes	Monitor, record, and report in accordance with Conditions 16.1 through 16.4.
AQ0486TVP03 – Condition 17.1	Minor Permit No. AQ0486MSS01 – Condition 9.1	Boiler Sulfur Limits	Limit the sulfur content of distillate fuel consumed to no greater than 0.5 percent by weight.	Yes	Monitor, record, and report in accordance with Conditions 17.3, 17.5 and 17.6.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 17.2	Minor Permit No. AQ0486MSS01 – Condition 9.2	Boiler Sulfur Limits	Burn pipeline quality natural gas with a sulfur content not to exceed 12 grains per 100 standard cubic feet.	Yes	Monitor, record, and report in accordance with Conditions 17.4 through and 17.6.
AQ0486TVP03 – Condition 23	40 CFR 60.7(b), Subpart A	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU ID 4, any malfunctions of associated air pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU ID 4 is inoperative.	Yes	Annual Compliance Certification.
AQ0486TVP03 – Condition 25	40 CFR 60.11(d), Subpart A	NSPS Subpart A Good Air Pollution Control Practice	At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU ID 4 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU ID 4.	Yes	Annual Compliance Certification.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 26	40 CFR 60.11(g), Subpart A	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 28, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether EU ID 4 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Annual Compliance Certification
AQ0486TVP03 – Conditions 27	40 CFR 60.12, Subpart A	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.	Yes	Annual Compliance Certification

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Conditions 28	40 CFR 60.48c(g) & (i), Subpart Dc	NSPS Subpart Dc Fuel Consumption	For EU ID 4, the Permittee shall record the amounts of each fuel combusted during each day and maintain the records for a period of two years following the date of such record; or monitor according to an EPA approved custom fuel-monitoring schedule. - As an alternative to meeting the requirements of Condition 28, the owner or operator of an affected facility that combusts only natural gas to demonstrate compliance with the SO_2 standard may elect to record and maintain records of the amount of each fuel combusted during each calendar month.	Yes	Annual Compliance Audit.
AQ0486TVP03 – Condition 28.1	40 CFR 60.42c(d) & (i), Subpart Dc	NSPS Subpart Dc Sulfur Standards	At all times, including periods of startup, shutdown, and malfunction, for EU ID 4, the Permittee shall combust fuel oil that contains no more than 0.5 percent sulfur by weight.	Yes	Monitor, record, and report in accordance with Conditions 28.2, 28.3, and 28.10 through 28.16.
AQ0486TVP03 – Condition 28.4	40 CFR 60.43c(c) & (d), Subpart Dc	NSPS Subpart Dc PM Standards	At all times while operating on diesel fuel, except during periods of startup, shutdown, and malfunction, the Permittee shall not cause to be discharged into the atmosphere from EU ID 4 any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.	Yes	Monitor, record, and report in accordance with Conditions 28.6 through 28.9.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Conditions 33 and 33.2	40 CFR 63.11193 & 63.11195(e), Subpart JJJJJJ	NESHAP Subpart JJJJJJ Applicability	If either boiler switches fuel or makes a physical change that results in the applicability of a different subcategory within Subpart JJJJJJ, or becomes subject to Subpart JJJJJJ, demonstrate compliance within 180 days of the effective date of the fuel switch or physical change.	Yes	Maintain records in accordance with Condition 33.3f.
AQ0486TVP03 – Condition 53	18 AAC 50.235(a), 50.326(j)(4), & 50.040(j)(4) 40 CFR 71.6(c)(6)	Technology-Based Emissions Standard	If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard listed in Condition 29, 30, or 33, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.	Yes	Annual Compliance Audit.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 63 Subpart JJJJJJ	These units are exempt from Subpart JJJJJJ because they only fire natural gas, or fire diesel no more than 48 hours per year.
40 CFR 60 Subpart Dc §§60.42c(a) through (c), and §§60.43c(a) and (b)	These units do not burn coal or wood.
40 CFR 60 Subpart Dc §§60.46c(a) through (d) and (f) and §§60.47c(a), (b) and (d) through (f)	These units do not burn coal or wood.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Permit Number: AQ0486TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 17
2.	Date installation/construction commenced[1]	1990
3.	Date installed	1990
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Cummins
7.	Type of combustion device	Emergency Generator Engine
8.	Rated design capacity (horsepower rating for engines)	402 hp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	300 kW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	20.6 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: None.

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 1	18 AAC 50.055(a)(1)	Industrial Process and Fuel-Burning Equipment Visible Emissions	The Permittee shall not cause or allow visible emissions, excluding condensed water vapor to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Condition 1.3.
AQ0486TVP03 – Condition 5	18 AAC 50.055(b)(1)	Industrial Process and Fuel-Burning Equipment Particulate Matter	The Permittee shall not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Condition 5.3.
AQ0486TVP03 – Condition 13	18 AAC 50.055(c)	Sulfur Compound Emissions	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. Monitor, record, and report in accordance with Conditions 13.1, 13.3, and 13.4.
AQ0486TVP03 – Condition 14	Minor Permit No. AQ0486MSS01– Condition 6	Emergency Generator Hourly Limits	Limit the operations of EU ID 17 to no more than 250 hours in any 12 consecutive month period.	Yes.	Monitor and report in accordance with Conditions 14.1 through 14.3.
AQ0486TVP03 – Condition 17.1	Minor Permit No. AQ0486MSS01 – Condition 9.1	Boiler Sulfur Limits	Limit the sulfur content of distillate fuel consumed to no greater than 0.5 percent by weight.	Yes	Monitor, record, and report in accordance with Conditions 17.3, 17.5 and 17.6.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Conditions 32 and 32.2	40 CFR 63.6585(c), 63.6590(a)(1)(iii), 63.6585(f), Subpart ZZZZ	NSPS Subpart ZZZZ Applicability	For EU IDs 17, 22, 30, 35, 39 and 42 through 46, the comply with the following applicable requirements of NESHAP Subpart ZZZZ. -For EU IDs 17, 22, 30, and 35, the emergency stationary RICE listed in Condition 32.2.a are not subject to NESHAP Subpart ZZZZ. The stationary RICE must meet the definition of an emergency stationary RICE in 40 CFR 63.6675, which includes operating according to the provisions specified in 40 CFR 63.6640(f).	Yes	Annual Compliance Audit
AQ0486TVP03 – Conditions 48 and 48.1	18 AAC 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall do the following for EU ID 17: - perform regular maintenance considering the manufacturer's or the operator's maintenance procedures.	Yes	Incorporate revised Standard Permit Condition VI. Maintain records in accordance with Conditions 48.2 and 48.3.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII	This engine is an emergency, non-fire pump emission unit that has not been manufactured after April 1, 2006 and has not been modified or reconstructed after July 11, 2005, per §60.4200(a)(2).
40 CFR 63 Subpart ZZZZ	Existing institutional emergency RICE at area sources are exempt from Subpart ZZZZ, per §63.6590(b)(3)(viii).

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Permit Number: AQ0486TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 22
2.	Date installation/construction commenced[1]	1992
3.	Date installed	1992
4.	Emission Unit serial number	10370
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Komatsu
7.	Type of combustion device	Emergency Generator Engine
8.	Rated design capacity (horsepower rating for engines)	604 hp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	450 kW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	30.8 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: None.

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 1	18 AAC 50.055(a)(1)	Industrial Process and Fuel-Burning Equipment Visible Emissions	The Permittee shall not cause or allow visible emissions, excluding condensed water vapor to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Conditions 1.1, and 2 through 4.
AQ0486TVP03 – Condition 5	18 AAC 50.055(b)(1)	Industrial Process and Fuel-Burning Equipment Particulate Matter	The Permittee shall not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Conditions 5.1, and 6 through 11.
AQ0486TVP03 – Condition 13	18 AAC 50.055(c)	Sulfur Compound Emissions	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. Monitor, record, and report in accordance with Conditions 13.1, 13.3, and 13.4.
AQ0486TVP03 – Condition 14	Minor Permit No. AQ0486MSS01 – Condition 6	Emergency Generator Hourly Limits	Limit the operations of EU ID 22 to no more than 250 hours each in any 12 consecutive month period.	Yes.	Monitor and report in accordance with Conditions 14.1 through 14.3.

AQ0486TVP03 – Conditions 32 and 32.2	40 CFR 63.6585(c), 63.6590(a)(1)(iii), 63.6585(f), Subpart ZZZZ	NSPS Subpart ZZZZ Applicability	For EU IDs 17, 22, 30, 35, 39 and 42 through 46, the comply with the following applicable requirements of NESHAP Subpart ZZZZ. -For EU IDs 17, 22, 30, and 35, the emergency stationary RICE listed in Condition 32.2.a are not subject to NESHAP Subpart ZZZZ. The stationary RICE must meet the definition of an emergency stationary RICE in 40 CFR 63.6675, which includes operating according to the provisions specified in 40 CFR 63.6640(f).	Yes	Annual Compliance Audit
AQ0486TVP03 – Conditions 48, 48.1	18 AAC 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall do the following for EU ID 22: - perform regular maintenance considering the manufacturer's or the operator's maintenance procedures.	Yes	Maintain records in accordance with Conditions 48.2 and 48.3.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII	This engine is an emergency, non-fire pump emission unit that has not been manufactured after April 1, 2006 and has not been modified or reconstructed after July 11, 2005, per §60.4200(a)(2).
40 CFR 63 Subpart ZZZZ	Existing institutional emergency RICE at area sources are exempt from Subpart ZZZZ, per §63.6590(b)(3)(viii).

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit Number: AQ0486TVP03

1.	Emission Unit ID Number // Operating Scenario	EU IDs 28 & 29
2.	Date installation/construction commenced	2005
3.	Date installed	2006
4.	Emission Unit serial number	93539 and 93535
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Bryan Boilers
7.	Description of emission unit, including type of boiler/heater and firing method: MOB hub natural-gas fired boilers	
8.	Rated design capacity (heat input, MMBtu/hr)	12.6 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	10,389 lb/hr
10.	Maximum steam pressure (psi)	
11.	Maximum steam temperature (°F)	212 °F

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Natural Gas	12.6 Mscf/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No.

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 1	18 AAC 50.055(a)(1)	Industrial Process and Fuel-Burning Equipment Visible Emissions	The Permittee shall not cause or allow visible emissions, excluding condensed water vapor to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition VIII. Monitor, record, and report in accordance with Condition 1.2.
AQ0486TVP03 – Condition 5	18 AAC 50.055(b)(1)	Industrial Process and Fuel-Burning Equipment Particulate Matter	The Permittee shall not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes	Incorporate revised Standard Permit Condition VIII. Monitor, record, and report in accordance with Condition 5.2.
AQ0486TVP03 – Condition 13	18 AAC 50.055(c)	Sulfur Compound Emissions	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Monitor, record, and report in accordance with Conditions 13.5, 17.4 and 17.6.
AQ0486TVP03 – Condition 16	Minor Permit No. AQ0486MSS01 – Condition 8	Boiler Natural Gas Limits	Limit the combined natural gas burned in EU IDs 1 through 4, 28 and 29 to no more than 1,000 million standard cubic feet in any 12 consecutive month period.	Yes	Monitor, record, and report in accordance with Conditions 16.1 through 16.4.
AQ0486TVP03 – Condition 17.2	Minor Permit No. AQ0486MSS01 – Condition 9.2	Boiler Sulfur Limits	Burn pipeline quality natural gas with a sulfur content not to exceed 12 grains per 100 standard cubic feet.	Yes	Monitor, record, and report in accordance with Conditions 17.4 through and 17.6.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 23	40 CFR 60.7(b), Subpart A	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU IDs 28 and 29, any malfunctions of associated air pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU IDs 28 and 29 is inoperative.	Yes	Annual Compliance Certification.
AQ0486TVP03 – Condition 25	40 CFR 60.11(d), Subpart A	NSPS Subpart A Good Air Pollution Control Practice	At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU IDs 28 and 29 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU IDs 28 and 29.	Yes	Annual Compliance Certification.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 26	40 CFR 60.11(g), Subpart A	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 28, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether EU IDs 28 and 29 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	Yes	Annual Compliance Certification.
AQ0486TVP03 – Conditions 27	40 CFR 60.12, Subpart A	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.	Yes	Annual Compliance Certification
AQ0486TVP03 – Condition 28	40 CFR 60.40c, Subpart Dc	NSPS Subpart Dc Applicability	For EU IDs 3, 4, 28, and 29, comply with the following applicable requirements of NSPS Subpart Dc.	Yes	Monitor, record, and report in accordance with Conditions 28.13 through 28.16

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 53	18 AAC 50.235(a), 50.326(j)(4), & 50.040(j)(4) 40 CFR 71.6(c)(6)	Technology-Based Emissions Standard	If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard listed in Condition 29, 30, or 33, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.	Yes	Annual Compliance Audit.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 60 Subpart Dc §§60.46c(a) through (d) and (f), and §§60.47c(a), (b), and (d) through (f)	These units demonstrate compliance based on fuel certifications, as described under §60.48c(f).
40 CFR 63 Subpart JJJJJJ	These units are exempt from Subpart JJJJJJ because they only fire natural gas.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Permit Number: AQ0486TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 30
2.	Date installation/construction commenced[1]	2005
3.	Date installed	2005
4.	Emission Unit serial number	79406248
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Cummins QSX15-G9
7.	Type of combustion device	Emergency Generator Engine
8.	Rated design capacity (horsepower rating for engines)	680 hp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	507 kW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	31.1 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: None.

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 1	18 AAC 50.055(a)(1)	Industrial Process and Fuel-Burning Equipment Visible Emissions	The Permittee shall not cause or allow visible emissions, excluding condensed water vapor to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Conditions 1.1, and 2 through 4.
AQ0486TVP03 – Condition 5	18 AAC 50.055(b)(1)	Industrial Process and Fuel-Burning Equipment Particulate Matter	The Permittee shall not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Conditions 5.1, and 6 through 11.
AQ0486TVP03 – Condition 13	18 AAC 50.055(c)	Sulfur Compound Emissions	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. Monitor, record, and report in accordance with Conditions 13.1, 13.3, and 13.4.
AQ0486TVP03 – Condition 14	Minor Permit No. AQ0486MSS01– Condition 6	Emergency Generator Hourly Limits	Limit the operations of EU ID 30 to no more than 250 hours each in any 12 consecutive month period.	Yes.	Monitor and report in accordance with Conditions 14.1 through 14.3.

AQ0486TVP03 – Conditions 32 and 32.2	40 CFR 63.6585(c), 63.6590(a)(1)(iii), 63.6585(f), Subpart ZZZZ	NSPS Subpart ZZZZ Applicability	For EU IDs 17, 22, 30, 35, 39 and 42 through 46, the comply with the following applicable requirements of NESHAP Subpart ZZZZ. - For EU IDs 17, 22, 30, and 35, the emergency stationary RICE listed in Condition 32.2.a are not subject to NESHAP Subpart ZZZZ. The stationary RICE must meet the definition of an emergency stationary RICE in 40 CFR 63.6675, which includes operating according to the provisions specified in 40 CFR 63.6640(f).	Yes	Annual Compliance Audit
AQ0486TVP03 – Conditions 48, 48.1	18 AAC 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall do the following for EU ID 30: - perform regular maintenance considering the manufacturer's or the operator's maintenance procedures.	Yes	Maintain records in accordance with Conditions 48.2 and 48.3.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII	This engine is an emergency, non-fire pump emission unit that has not been manufactured after April 1, 2006 and has not been modified or reconstructed after July 11, 2005, per §60.4200(a)(2).
40 CFR 63 Subpart ZZZZ	Existing institutional emergency RICE at area sources are exempt from Subpart ZZZZ per §63.6590(b)(3)(viii).

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Permit Number: AQ0486TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 35
2.	Date installation/construction commenced[1]	2006
3.	Date installed	2006
4.	Emission Unit serial number	00314576
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Cummins
7.	Type of combustion device	Emergency Generator Engine
8.	Rated design capacity (horsepower rating for engines)	1,046 hp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	780 kW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	53.4 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: None.

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 1	18 AAC 50.055(a)(1)	Industrial Process and Fuel-Burning Equipment Visible Emissions	The Permittee shall not cause or allow visible emissions, excluding condensed water vapor to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Conditions 1.1, and 2 through 4.
AQ0486TVP03 – Condition 5	18 AAC 50.055(b)(1)	Industrial Process and Fuel-Burning Equipment Particulate Matter	The Permittee shall not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Conditions 5.1, and 6 through 11.
AQ0486TVP03 – Condition 13	18 AAC 50.055(c)	Sulfur Compound Emissions	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. Monitor, record, and report in accordance with Conditions 13.1, 13.3, and 13.4.
AQ0486TVP03 – Condition 17.1	Minor Permit No. AQ0486MSS01 – Condition 9.1	Boiler Sulfur Limits	Limit the sulfur content of distillate fuel consumed to no greater than 0.5 percent by weight.	Yes	Monitor, record, and report in accordance with Conditions 17.3, 17.5 and 17.6.

AQ0486TVP03 – Conditions 32 and 32.2	40 CFR 63.6585(c), 63.6590(a)(1)(iii), 63.6585(f), Subpart ZZZZ	NSPS Subpart ZZZZ Applicability	For EU IDs 17, 22, 30, 35, 39 and 42 through 46, the comply with the following applicable requirements of NESHAP Subpart ZZZZ. - For EU IDs 17, 22, 30, and 35, the emergency stationary RICE listed in Condition 32.2.a are not subject to NESHAP Subpart ZZZZ. The stationary RICE must meet the definition of an emergency stationary RICE in 40 CFR 63.6675, which includes operating according to the provisions specified in 40 CFR 63.6640(f).	Yes	Annual Compliance Audit
AQ0486TVP03 – Conditions 48, 48.1	18 AAC 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall do the following for EU ID 35: - perform regular maintenance considering the manufacturer's or the operator's maintenance procedures.	Yes	Maintain records in accordance with Conditions 48.2 and 48.3.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII	This engine is an emergency, non-fire pump emission unit that has not been manufactured after April 1, 2006 and has not been modified or reconstructed after July 11, 2005, per §60.4200(a)(2).
40 CFR 63 Subpart ZZZZ	Existing institutional emergency RICE at area sources are exempt from Subpart ZZZZ per §63.6590(b)(3)(viii).

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Permit Number: AQ0486TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 39
2.	Date installation/construction commenced[1]	2009
3.	Date installed	2009
4.	Emission Unit serial number	3400247
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Cummins QSX15-G9
7.	Type of combustion device	Emergency Generator Engine
8.	Rated design capacity (horsepower rating for engines)	680 hp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	507 kW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	34.7 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: None.

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 1	18 AAC 50.055(a)(1)	Industrial Process and Fuel-Burning Equipment Visible Emissions	The Permittee shall not cause or allow visible emissions, excluding condensed water vapor to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Conditions 1.1, and 2 through 4.
AQ0486TVP03 – Condition 5	18 AAC 50.055(b)(1)	Industrial Process and Fuel-Burning Equipment Particulate Matter	The Permittee shall not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Conditions 5.1, and 6 through 11.
AQ0486TVP03 – Condition 13	18 AAC 50.055(c)	Sulfur Compound Emissions	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. Monitor, record, and report in accordance with Conditions 13.2 through 13.4.
AQ0486TVP03 – Condition 20	Minor Permit No. AQ0486MSS02 Condition 11	Fuel Sulfur Limits to Avoid Classification under 18 AAC 50.502(c)(3)(A)(ii)	To avoid classification under 18 AAC 50.502(c)(3) for SO_2 emissions, the Permittee shall limit the total SO_2 emissions from EU IDs 39, and 42 through 47 to less than 10 tons per consecutive 12-month period as follows: - Burn only diesel fuel with a sulfur content not exceeding 0.05 percent by weight in EU ID 39.	Yes	Monitor and report in accordance with Conditions 20.2 through 20.5.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Conditions 29, 29.2	40 CFR 60.4200(a), Subpart IIII, 40 CFR 60.4201(a) & 60.4204(b), Subpart IIII	NSPS Subpart IIII Emission Standards	The Permittee shall comply with the applicable emission standards for EU ID 39, as listed below: (i) 4.0 g/kW-hr for NMHC + NO_X; (ii) 3.5 g/kW-hr for CO; and (iii) 0.20 g/kW-hr for PM b. Exhaust opacity from EU ID 39 must not exceed: (i) 20 percent during the acceleration model (ii) 15 percent during the lugging mode; and (iii) 50 percent during the peaks in either the acceleration or lugging modes.	Yes	Monitor, record, and report in accordance with Condition 29.3 and 29.5 through 29.8.
AQ0486TVP03 – Condition 29.4	40 CFR 80.510(b), Subpart I, 40 CFR 60.4207(b), Subpart IIII	NSPS Subpart IIII Fuel Requirements	For EU ID 39, the Permittee must use ULSD that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.	Yes	Annual Compliance Audit.
AQ0486TVP03 – Condition 32, 32.1	40 CFR 63.6590(c)(1), Subpart ZZZZ	NESHAP Subpart ZZZZ	For EU ID 39, which are located at an area source of HAPs, the Permittee must comply with the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII. No further requirements apply for these engines under 40 CFR 63 Subpart ZZZZ.	Yes	Reasonable inquiry.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 53	18 AAC 50.235(a), 50.326(j)(4), & 50.040(j)(4) 40 CFR 71.6(c)(6)	Technology-Based Emissions Standard	If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard listed in Condition 29, 30, or 33, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.	Yes	Annual Compliance Audit.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII §60.4204	Affected unit is an emergency engine.
40 CFR 60 Subpart IIII §60.4209(a)	Not an affected unit because the engine is certified to meet non-emergency engine emission standards.
40 CFR 63 Subpart ZZZZ	New RICE at area sources are subject to the requirements in 40 CFR 60 Subpart IIII, per §63.6590(c)(1).

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Permit Number: AQ0486TVP03

1.	Emission Unit ID Number // Operating Scenario	EU IDs 42 – 45
2.	Date installation/construction commenced[1]	2010
3.	Date installed	2011
4.	Emission Unit serial number	SBJ01045, SBJ01043, SBJ01044, and SBJ01042
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	CAT 3516
7.	Type of combustion device	EPSS Generator
8.	Rated design capacity (horsepower rating for engines)	2,937 hp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	2,190 kW

1. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	138.9 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: None.

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 1	18 AAC 50.055(a)(1)	Industrial Process and Fuel-Burning Equipment Visible Emissions	The Permittee shall not cause or allow visible emissions, excluding condensed water vapor to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Conditions 1.1, and 2 through 4.
AQ0486TVP03 – Condition 5	18 AAC 50.055(b)(1)	Industrial Process and Fuel-Burning Equipment Particulate Matter	The Permittee shall not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report in accordance with Conditions 5.1, and 6 through 8.
AQ0486TVP03 – Conditions 13	18 AAC 50.055(c)	Sulfur Compound Emissions	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. Monitor, record, and report in accordance with Conditions 13.2, 13.4, 20, 20.1, and 20.3 through 20.5.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Conditions 18, 18.1b	Minor Permit No. AQ0486MSS02 – Condition 6	Ambient Air Quality Protection Requirements	For EU IDs 42 through 46 (i) Install and maintain each exhaust stack as follows: (A) A release height that equals or exceeds: (1) 53 feet above grade; (2) seven feet above the generator building roof; and (3) two feet above the highest portion (penthouse) of the generator building. (B) Oriented at 60 degrees or more above the horizontal. (ii) For EU ID 46, provide as-built drawings and photographs of the exhaust stack in the first operating report required under Condition 70 that would be due after installation of the exhaust stack.	Yes	Annual Compliance Audit.
AQ0486TVP03 – Conditions 19, 19.1	Minor Permit No. AQ0486MSS02 – Condition 10	Owner Requested Limits (ORLs) to Avoid Classification under Prevention of Significant Deterioration (PSD)	To avoid classification as a PSD major stationary source under 18 AAC 50.306 for oxides of nitrogen (NO_X) emissions, the Permittee shall limit the total NO_X emissions from EU IDs 42 through 47 to less than 250 tons per 12-month rolling period. For EU IDs 42 through 46: - Limit the combined hours of operation to no more than 2,400 hours per 12-month rolling period.	Yes	Monitor, record, and report in accordance with Conditions 19.2 through 19.6.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 20, 20.1	Minor Permit No. AQ0486MSS02 – Condition 11	ORLs to Avoid Classification under PSD	To avoid classification under 18 AAC 50.502(c)(3) for SO_2 emissions, the Permittee shall limit the total SO_2 emissions from EU IDs 39, and 42 through 47 to less than 10 tons per consecutive 12-month period as follows: - Burn only diesel fuel that complies with the applicable fuel sulfur requirements of 40 CFR 60, Subpart IIII in EU IDs 42 through 46.	Yes	Monitor and report in accordance with Conditions 20.3 through 20.5.
AQ0486TVP03 – Conditions 29 and 29.1	40 CFR 60.4200(a), Subpart IIII	NSPS Subpart IIII Applicability	For EU IDs 42 through 46, the Permittee shall comply with the following applicable requirements of NSPS Subpart IIII. -comply with the following emission standards: a. NMHC+NOx: 6.4 g/kW-hr b. CO: 3.5 g/kW-hr c. PM: 0.20 g/kW--hr	Yes	Monitor, record, and report as required in Conditions 29.3 and 29.5 through 29.8.
AQ0486TVP03 – Condition 29.4	40 CFR 80.510(b), Subpart I, 40 CFR 60.4207(b), Subpart IIII	NSPS Subpart IIII Fuel Requirements	For EU ID 42 through 46, the Permittee must use ULSD that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.	Yes	Annual Compliance Audit.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Conditions 32, 32.1	40 CFR 63.6585(c)& 63.6590(a)(1)(iii), Subpart ZZZZ	NSPS Subpart ZZZZ Applicability	For EU IDs 17, 22, 30, 35, 39 and 42 through 46, the comply with the following applicable requirements of NESHAP Subpart ZZZZ. - For EU IDs 39 and 42 through 46, meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR part 60 Subpart IIII. No further requirements apply for such engines under 40 CFR 63.	Yes	Annual Compliance Audit.
AQ0486TVP03 – Condition 53	18 AAC 50.235(a), 50.326(j)(4), & 50.040(j)(4) 40 CFR 71.6(c)(6)	Technology-Based Emissions Standard	If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard listed in Condition 29, 30, or 33, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.	Yes	Annual Compliance Audit.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII §60.4205	Affected units are non-emergency engines.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit Number: AQ0486TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 52
2.	Date installation/construction commenced	2011
3.	Date installed	2011
4.	Emission Unit serial number	N/A
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Weil McLain
7.	Description of emission unit, including type of boiler/heater and firing method: Model 880 Series 1 Diesel-fired boiler	
8.	Rated design capacity (heat input, MMBtu/hr)	0.872 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	872 lb/hr
10.	Maximum steam pressure (psi)	15 psi
11.	Maximum steam temperature (°F)	250 °F

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	6.4 gal/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No.

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 1	18 AAC 50.055(a)(1)	Industrial Process and Fuel-Burning Equipment Visible Emissions	The Permittee shall not cause or allow visible emissions, excluding condensed water vapor to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition. Monitor, record, and report in accordance with Condition 1.4.
AQ0486TVP02 – Condition 5	18 AAC 50.055(b)(1)	Industrial Process and Fuel-Burning Equipment Particulate Matter	The Permittee shall not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes	Incorporate revised Standard Permit Condition. Monitor, record, and report in accordance with Condition 5.4.
AQ0486TVP03 – Condition 13	18 AAC 50.055(c)	Sulfur Compound Emissions	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition. Monitor, record, and report in accordance with Conditions 13.1, and 13.3 through 13.4.
AQ0486TVP03 – Condition 15	Minor Permit No. AQ0486MSS01 – Condition 7	Boiler Distillate Oil Limits	Limit the combined distillate fuel oil burned in EU IDs 1 through 4 to no more than 500,000 gallons in any 12 consecutive month period.	Yes	Monitor, record, and report in accordance with Conditions 15.1 through 15.4.
AQ0486TVP03 – Conditions 33 and 33.1	40 CFR 63.11193 , 63.11194, 63.11201(b) & Table 2, Item 12, Subpart JJJJJJ	NESHAP Subpart JJJJJJ Applicability & Work Practice Standards and Management Practices	For EU ID 52, the Permittee shall comply with the applicable requirements of NESHAP Subpart JJJJJJ. 33.1 For EU ID 52, comply with the following a. Conduct a tune-up of the boiler every 5 years as specified in Condition 33.3b	Yes	Comply with Condition 41.4. Record and report in accordance with Conditions 45 through 48.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0486TVP03 – Condition 33.2	40 CFR 63.11210(i), Subpart JJJJJJ	NESHAP Subpart JJJJJJ Initial Compliance Requirements	For affected boilers that switch fuels or make a physical change to the boiler that results in the applicability of a different subcategory within NESHAP Subpart JJJJJJ or the boiler becoming subject to NESHAP Subpart JJJJJJ, the Permittee must demonstrate compliance within 180 days of the effective date of the fuel switch or the physical change.	Yes	Report in accordance with Condition 33.3f.
AQ0486TVP03 – Conditions 33.3a and 33.3b	40 CFR 63.11223(a) & (b), Subpart JJJJJJ	NESHAP Subpart JJJJJJ Continuous Compliance Requirements	33.3a For affected sources subject to the work practice standard or the management practices of a tune-up, you must conduct a performance tune-up according to Condition 33.3.b and keep records as required in Condition 33.3.d to demonstrate continuous compliance. You must conduct the tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up. 33.3b You must conduct a tune-up of the boiler every 5 years to demonstrate continuous compliance as specified in Conditions 33.3.b(i) through 33.3.b(vii). Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up.	Yes	Monitor, record, and report in accordance with Conditions 33.3c through 33.3f.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

Appendix C Pollution Control Devices – *Not Applicable*

Application for Renewal of an Air Quality Operating Permit

Providence Alaska Medical Center

Providence Health System – Washington Inc.

SLR Project No.: 105.00541.23001

January 8, 2024

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Appendix D Emissions Summary

Application for Renewal of an Air Quality Operating Permit

Providence Alaska Medical Center

Providence Health System – Washington Inc.

SLR Project No.: 105.00541.23001

January 8, 2024

D.1 Form D1: Potential to Emit (after controls/limitations) Emissions

D.2 Form D2: Potential to Emit (before controls/limitations) Emissions

D.3 Form D3: Expected Actual Annual Emissions

Table D-1.1. Potential Annual Emissions (after controls/limitations) Summary
Providence Health System - Providence Alaska Medical Center

Emission Unit Type	Regulated Air Pollutant Emissions (tons per year) [1,2]							
	NO_X	CO	PM_{10}	$PM_{2.5}$ [3]	VOC	SO_2	HAP	GHG (CO_2e) [4]
Significant	122.1	51.2	5.5	5.5	3.8	36.2	1.0	69,549
Insignificant	12.0	9.3	0.9	0.9	0.7	4.1	0.2	14,671
Stationary Source Total	**134.1**	**60.5**	**6.4**	**6.4**	**4.4**	**40.3**	**1.3**	**84,220.1**
Fees Apply to Pollutant?	**Yes**	**Yes**	**Yes**	**No [3]**	**Yes**	**Yes**	**No [5]**	**No [6]**
Total Assessable Emissions	**246**							

Notes:

[1] Emissions are potential to emit, except where noted, based on maximum allowable operation and permit operating limits, where applicable.

[2] Regulated air pollutant calculations based on AP-42 emission factors, manufacturer data, and mass balances as shown in accompanying spreadsheets.

[3] PM_{10} emissions are assumed to equal $PM_{2.5}$ emissions. PM2.5 emissions excluded from assessable emissions total to avoid double payment.

[4] GHG emissions are defined as CO_2e emissions. CO_2e is the summations of CO_2, CH_4, and N_2O, applying the global warming potential for each pollutant.

[5] HAP emissions are a subset of either VOC emissions or PM_{10} emissions and are excluded from the assessable emissions total to avoid a double payment.

[6] Assessable emission fees for GHGs have not been established under 18 AAC 50.

Table D-1.2. Potential Annual Emissions (after controls/limitations) Inventory - Significant Emission Units
Providence Health System - Providence Alaska Medical Center

Emission Unit					Installation	Fuel	
ID	Equip. No.	Description	Make/Model	Bldg. No.	Date	Type	Rating
1	SB-03	Steam Boiler	E. Keller	Bldg. SB	1974	Dual Fuel	38.5 MMBtu/hr
2	SB-04	Steam Boiler	E. Keller	Bldg. SB	1974	Dual Fuel	38.5 MMBtu/hr
3	SB-05	Steam Boiler	Nebraska	Bldg. SB	1990	Dual Fuel	49.0 MMBtu/hr
4	SB-06	Steam Boiler	Cleaver Brooks	Bldg. SB	2000	Dual Fuel	42.2 MMBtu/hr
17	G-201	Emergency Generator Engine	Cummins	Bldg. B	1990	Diesel	300 kW
22	G-301	Emergency Generator Engine	Komatsu	Bldg. A	1992	Diesel	450 kW
28	B-1	MOB Hub Boiler 1	Bryan	Bldg. T	2006	Natural Gas	12.6 MMBtu/hr
29	B-2	MOB Hub Boiler 2	Bryan	Bldg. T	2006	Natural Gas	12.6 MMBtu/hr
30	G-1	Emergency Generator Engine	Cummins	Bldg. T	2005	Diesel	680 hp
35	API-3	PRB Emergency Generator Engine	Cummins	Bldg. PRB	2006	Diesel	1,046 hp
39	G-2	Tower S Emergency Generator Engine	Cummins QSB7-G3	Bldg. S	2009	Diesel	680 hp
42	EPSS-1	EPSS Generator 1	CAT D3516C	Bldg. K	2011	Diesel	2,937 hp
43	EPSS-2	EPSS Generator 2	CAT D3516C	Bldg. K	2011	Diesel	2,937 hp
44	EPSS-3	EPSS Generator 3	CAT D3516C	Bldg. K	2011	Diesel	2,937 hp
45	EPSS-4	EPSS Generator 4	CAT D3516C	Bldg. K	2011	Diesel	2,937 hp
52	NA	Boiler	Weil McLain	Bldg. K	Unknown	Diesel	0.872 MMBtu/hr

Table D-1.3. Potential Annual Emissions (after controls/limitations) Inventory - Insignificant Emission Units
Providence Health System - Providence Alaska Medical Center

Emission Unit(s)					Fuel Type	Rating	Basis for Insignificance
ID	Equip. No.	Description	Make/Model	Bldg. No.			
9	UH-701	Space Heater	Modine	Greenhouse	Natural Gas	0.175 MMBtu/hr	18 AAC 50.326(g)(5)
10	UH-702	Space Heater	Modine	Greenhouse	Natural Gas	0.175 MMBtu/hr	18 AAC 50.326(g)(5)
12	SF-701	Supply Fan/Space Heater	Reznor	Carpentry Shop	Natural Gas	0.250 MMBtu/hr	18 AAC 50.326(g)(5)
20	HB-301	Boiler	Aerco Benchmark 2.0	Bldg. A	Natural Gas	2.0 MMBtu/hr	18 AAC 50.326(g)(5)
21	HB-302	Boiler	Aerco Benchmark 2.0	Bldg. A	Natural Gas	2.0 MMBtu/hr	18 AAC 50.326(g)(5)
22	HB-303	Boiler	Aerco Benchmark 2.0	Bldg. A	Natural Gas	2.0 MMBtu/hr	18 AAC 50.326(g)(5)
31	B-5	MOB Hub Boiler 5	Aerco	Bldg. T	Natural Gas	2.0 MMBtu/hr	18 AAC 50.326(g)(5)
32	B-6	MOB Hub Boiler 6	Aerco	Bldg. T	Natural Gas	2.0 MMBtu/hr	18 AAC 50.326(g)(5)
33	BLR-1001	API Boiler 1	Aerco	Bldg. PRB	Natural Gas	2.0 MMBtu/hr	18 AAC 50.326(g)(5)
34	BLR-1002	API Boiler 2	Aerco	Bldg. PRB	Natural Gas	2.0 MMBtu/hr	18 AAC 50.326(g)(5)
36	BLR-1003	API Boiler 3	Aerco	Bldg. PRB	Natural Gas	2.0 MMBtu/hr	18 AAC 50.326(g)(5)
N/A	NA	Boiler 1	Unknown	Bldg. B	Natural Gas	0.29 MMBtu/hr	18 AAC 50.326(g)(5)
N/A	NA	Boiler 2	Unknown	Bldg. B	Natural Gas	0.29 MMBtu/hr	18 AAC 50.326(g)(5)
N/A	NA	Hot Water Heater 1	Unknown	Bldg. PRB	Natural Gas	1.0 MMBtu/hr	18 AAC 50.326(g)(5)
N/A	NA	Hot Water Heater 2 (backup)	Unknown	Bldg. PRB	Natural Gas	1.0 MMBtu/hr	18 AAC 50.326(g)(5)
51	NA	Hydronic Boiler 1	Weil McLain	PS3	Natural Gas	0.175 MMBtu/hr	18 AAC 50.326(g)(5)
53	NA	Hydronic Boiler 2	Weil McLain	PS3	Natural Gas	0.175 MMBtu/hr	18 AAC 50.326(g)(5)
54	NA	Boiler	Aerco	Bldg. K	Natural Gas	0.970 MMBtu/hr	18 AAC 50.326(g)(5)
55	RUT-1	Rooftop Heating Unit 1	York	Bldg. X	Natural Gas	0.125 MMBtu/hr	18 AAC 50.326(g)(5)
56	RUT-2	Rooftop Heating Unit 2	York	Bldg. X	Natural Gas	0.125 MMBtu/hr	18 AAC 50.326(g)(5)
57	RUT-3	Rooftop Heating Unit 3	York	Bldg. X	Natural Gas	0.125 MMBtu/hr	18 AAC 50.326(g)(5)
58	RUT-4	Rooftop Heating Unit 4	York	Bldg. X	Natural Gas	0.125 MMBtu/hr	18 AAC 50.326(g)(5)
59	RUT-5	Rooftop Heating Unit 5	York	Bldg. X	Natural Gas	0.125 MMBtu/hr	18 AAC 50.326(g)(5)
60	RUT-6	Rooftop Heating Unit 6	York	Bldg. X	Natural Gas	0.125 MMBtu/hr	18 AAC 50.326(g)(5)
61	Hum-900	Humidifier	Dristeem	Bldg. U	Natural Gas	0.3 MMBtu/hr	18 AAC 50.326(g)(5)
62	BLR-900	Boiler	Aerco	Bldg. S	Natural Gas	2.0 MMBtu/hr	18 AAC 50.326(g)(5)
63	BLR-901	Boiler	Aerco	Bldg. S	Natural Gas	2.0 MMBtu/hr	18 AAC 50.326(g)(5)
64	HU-900	Humidifier	Carel	Bldg. S	Natural Gas	0.055 MMBtu/hr	18 AAC 50.326(g)(5)
65	B-2000	Boiler	Aerco	Bldg. HH	Natural Gas	2.0 MMBtu/hr	18 AAC 50.326(g)(5)
66	N/A	Ace Tank Distillate Storage	N/A	Above Ground	Diesel	1,000 gallons	18 AAC 50.326(e)
67	N/A	201 Underground Storage Tank	N/A	Underground	Diesel	2,000 gallons	18 AAC 50.326(e)
69	NA	EPSS Storage Tank 1	Unknown	Bldg. K	Diesel	45,000 gallons	18 AAC 50.326(e)
70	NA	EPSS Storage Tank 2	Unknown	Bldg. K	Diesel	45,000 gallons	18 AAC 50.326(e)

Table D-1.4. Potential Annual Emissions (after controls/limitations) Calculations - Oxides of Nitrogen (NO_X) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	NO_X Emission Factor	Emission Unit Rating/Capacity	Allowable Annual Operation [1]	Potential NO_X Emissions [2]
Significant Emission Units							
1	Steam Boiler	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	38.5 MMBtu/hr	1,000 MMscf/yr	50.0 tpy
2	Steam Boiler	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	38.5 MMBtu/hr		
3	Steam Boiler	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	49.0 MMBtu/hr		
4	Steam Boiler	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	42.2 MMBtu/hr		
28	MOB Hub Boiler 1	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	12.6 MMBtu/hr		
29	MOB Hub Boiler 2	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	12.6 MMBtu/hr		
1	SB-03 Steam Boiler	Diesel	Table 1.3-1, AP-42	20 lb/kgal	38.5 MMBtu/hr	500,000 gal/yr	5.0 tpy
2	SB-04 Steam Boiler	Diesel	Table 1.3-1, AP-42	20 lb/kgal	38.5 MMBtu/hr		
3	SB-05 Steam Boiler	Diesel	Table 1.3-1, AP-42	20 lb/kgal	49.0 MMBtu/hr		
4	SB-06 Steam Boiler	Diesel	Table 1.3-1, AP-42	20 lb/kgal	42.2 MMBtu/hr		
17	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.031 lb/hp-hr	300 kW	250 hr/yr	1.6 tpy
22	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.031 lb/hp-hr	450 kW	250 hr/yr	2.3 tpy
30	Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.024 lb/hp-hr	680 hp	250 hr/yr	2.0 tpy
35	PRB Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.024 lb/hp-hr	1,046 hp	500 hr/yr [3]	6.3 tpy
39	Tower S Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.024 lb/hp-hr	680 hp	500 hr/yr [3]	4.1 tpy
42	EPSS Generator 1	Diesel	Vendor Data	41.9 lb/hr	2,937 hp	2,400 hr/yr	50.2 tpy
43	EPSS Generator 2	Diesel	Vendor Data	41.9 lb/hr	2,937 hp		
44	EPSS Generator 3	Diesel	Vendor Data	41.9 lb/hr	2,937 hp		
45	EPSS Generator 4	Diesel	Vendor Data	41.9 lb/hr	2,937 hp		
52	Boiler	Diesel	Table 1.3-1, AP-42	20.0 lb/kgal	0.872 MMBtu/hr	8,760 hr/yr	0.6 tpy
						Significant Emission Units Total Potential to Emit - NO_X	**122.1 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-1, AP-42	94 lb/MMscf	4.3 MMBtu/hr	8,760 hr/yr	1.8 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	23.3 MMBtu/hr	8,760 hr/yr	10.2 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gallons	8,760 hr/yr	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gallons	8,760 hr/yr	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gallons	8,760 hr/yr	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gallons	8,760 hr/yr	0 tpy
						Insignificant Emission Units Total Potential to Emit - NO_X	**12.0 tpy**
						Total Potential to Emit - NO_X	**134.1 tpy**

Notes:

[1] Maximum annual operation for all units based on full-time operation, or permit operating limits, where applicable.

[2] Conversion factors:

Diesel Heating Value	137,000 Btu/gal
Natural Gas Heat Content:	1,000 Btu/scf
Engine Heat Rate:	7,000 Btu/hp-hr

[3] According to a memorandum from John S. Seitz of the EPA, 500 hours of operation is an appropriate default assumption for estimating the number of hours an emergency generator could be expected to operate per year.

Table D-1.5. Potential Annual Emissions (after controls/limitations) Calculations - Carbon Monoxide (CO) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	CO Emission Factor	Emission Unit Rating/Capacity	Allowable Annual Operation [1]	Potential CO Emissions [2]
Significant Emission Units							
1	Steam Boiler	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	38.5 MMBtu/hr	1,000 MMscf/yr	42.0 tpy
2	Steam Boiler	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	38.5 MMBtu/hr		
3	Steam Boiler	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	49.0 MMBtu/hr		
4	Steam Boiler	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	42.2 MMBtu/hr		
28	MOB Hub Boiler 1	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	12.6 MMBtu/hr		
29	MOB Hub Boiler 2	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	12.6 MMBtu/hr		
1	SB-03 Steam Boiler	Diesel	Table 1.3-1, AP-42	5 lb/kgal	38.5 MMBtu/hr	500,000 gal/yr	1.3 tpy
2	SB-04 Steam Boiler	Diesel	Table 1.3-1, AP-42	5 lb/kgal	38.5 MMBtu/hr		
3	SB-05 Steam Boiler	Diesel	Table 1.3-1, AP-42	5 lb/kgal	49.0 MMBtu/hr		
4	SB-06 Steam Boiler	Diesel	Table 1.3-1, AP-42	5 lb/kgal	42.2 MMBtu/hr		
17	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.00668 lb/hp-hr	300 kW	250 hr/yr	0.3 tpy
22	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.00668 lb/hp-hr	450 kW	250 hr/yr	0.5 tpy
30	Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.0055 lb/hp-hr	680 hp	250 hr/yr	0.5 tpy
35	PRB Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.0055 lb/hp-hr	1,046 hp	500 hr/yr [3]	1.4 tpy
39	Tower S Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.0055 lb/hp-hr	680 hp	500 hr/yr [3]	0.9 tpy
42	EPSS Generator 1	Diesel	Vendor Data	3.43 lb/hr	2,937 hp	2,400 hr/yr	4.1 tpy
43	EPSS Generator 2	Diesel	Vendor Data	3.43 lb/hr	2,937 hp		
44	EPSS Generator 3	Diesel	Vendor Data	3.43 lb/hr	2,937 hp		
45	EPSS Generator 4	Diesel	Vendor Data	3.43 lb/hr	2,937 hp		
52	Boiler	Diesel	Table 1.3-1, AP-42	5 lb/kgal	0.872 MMBtu/hr	8,760 hr/yr	0.1 tpy
						Significant Emission Units Total Potential to Emit - CO	**51.2 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-1, AP-42	40 lb/MMscf	4.3 MMBtu/hr	8,760 hr/yr	0.76 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	23.3 MMBtu/hr	8,760 hr/yr	8.56 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gallons	8,760 hr/yr	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gallons	8,760 hr/yr	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gallons	8,760 hr/yr	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gallons	8,760 hr/yr	0 tpy
						Insignificant Emission Units Total Potential to Emit - CO	**9.3 tpy**
						Total Potential to Emit - CO	**60.5 tpy**

Notes:

[1] Maximum annual operation for all units based on full-time operation, or permit operating limits, where applicable.

[2] Conversion factors:

Diesel Heating Value	137,000 Btu/gal
Natural Gas Heat Content:	1,000 Btu/scf
Engine Heat Rate:	7,000 Btu/hp-hr

[3] According to a memorandum from John S. Seitz of the EPA, 500 hours of operation is an appropriate default assumption for estimating the number of hours an emergency generator could be expected to operate per year.

Table D-1.6. Potential Annual Emissions (after controls/limitations) Calculations - Particulate Matter Less Than 10 Microns (PM_{10}) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	PM_{10} Emission Factor	Emission Unit Rating/Capacity	Allowable Annual Operation [1]	Potential PM_{10} Emissions [2]
Significant Emission Units							
1	Steam Boiler	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	38.5 MMBtu/hr	1,000 MMscf/yr	3.8 tpy
2	Steam Boiler	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	38.5 MMBtu/hr		
3	Steam Boiler	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	49.0 MMBtu/hr		
4	Steam Boiler	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	42.2 MMBtu/hr		
28	MOB Hub Boiler 1	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	12.6 MMBtu/hr		
29	MOB Hub Boiler 2	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	12.6 MMBtu/hr		
1	SB-03 Steam Boiler	Diesel	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/kgal	38.5 MMBtu/hr	500,000 gal/yr	0.8 tpy
2	SB-04 Steam Boiler	Diesel	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/kgal	38.5 MMBtu/hr		
3	SB-05 Steam Boiler	Diesel	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/kgal	49.0 MMBtu/hr		
4	SB-06 Steam Boiler	Diesel	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/kgal	42.2 MMBtu/hr		
17	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.0022 lb/hp-hr	300 kW	250 hr/yr	0.1 tpy
22	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.0022 lb/hp-hr	450 kW	250 hr/yr	0.2 tpy
30	Emergency Generator Engine	Diesel	Table 3.4-2, AP-42	0.0573 lb/MMBtu	680 hp	250 hr/yr	0.03 tpy
35	PRB Emergency Generator Engine	Diesel	Table 3.4-2, AP-42	0.0573 lb/MMBtu	1,046 hp	500 hr/yr [3]	0.1 tpy
39	Tower S Emergency Generator Engine	Diesel	Table 3.4-2, AP-42	0.0573 lb/MMBtu	680 hp	500 hr/yr [3]	0.07 tpy
42	EPSS Generator 1	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	2,400 hrs/yr	0.3 tpy
43	EPSS Generator 2	Diesel	Vendor Data	0.23 lb/hr	2,937 hp		
44	EPSS Generator 3	Diesel	Vendor Data	0.23 lb/hr	2,937 hp		
45	EPSS Generator 4	Diesel	Vendor Data	0.23 lb/hr	2,937 hp		
52	Boiler	Diesel	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/kgal	0.872 MMBtu/hr	8,760 hr/yr	0.09 tpy
					Significant Emission Units Total Potential to Emit - PM_{10}		**5.5 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	4.3 MMBtu/hr	8,760 hr/yr	0.14 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	23.3 MMBtu/hr	8,760 hr/yr	0.8 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gallons	8,760 hr/yr	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gallons	8,760 hr/yr	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gallons	8,760 hr/yr	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gallons	8,760 hr/yr	0 tpy
					Insignificant Emission Units Total Potential to Emit - PM_{10}		**0.9 tpy**
					Total Potential to Emit - PM_{10}		**6.4 tpy**

Notes:

[1] Maximum annual operation for all units based on full-time operation, or permit operating limits, where applicable.

[2] Conversion factors:

Diesel Heating Value	137,000 Btu/gal
Natural Gas Heat Content:	1,000 Btu/scf
Engine Heat Rate:	7,000 Btu/hp-hr

[3] According to a memorandum from John S. Seitz of the EPA, 500 hours of operation is an appropriate default assumption for estimating the number of hours an emergency generator could be expected to operate per year.

Table D-1.7. Potential Annual Emissions (after controls/limitations) Calculations - Volatile Organic Compounds (VOC) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	VOC Emission Factor	Emission Unit Rating/Capacity	Allowable Annual Operation [1]	Potential VOC Emissions [2]
Significant Emission Units							
1	Steam Boiler	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	38.5 MMBtu/hr	1,000 MMscf/yr	2.8 tpy
2	Steam Boiler	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	38.5 MMBtu/hr		
3	Steam Boiler	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	49.0 MMBtu/hr		
4	Steam Boiler	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	42.2 MMBtu/hr		
28	MOB Hub Boiler 1	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	12.6 MMBtu/hr		
29	MOB Hub Boiler 2	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	12.6 MMBtu/hr		
1	SB-03 Steam Boiler	Diesel	Table 1.3-1, AP-42	0.2 lb/kgal	38.5 MMBtu/hr	500,000 gal/yr	0.1 tpy
2	SB-04 Steam Boiler	Diesel	Table 1.3-1, AP-42	0.2 lb/kgal	38.5 MMBtu/hr		
3	SB-05 Steam Boiler	Diesel	Table 1.3-1, AP-42	0.2 lb/kgal	49.0 MMBtu/hr		
4	SB-06 Steam Boiler	Diesel	Table 1.3-1, AP-42	0.2 lb/kgal	42.2 MMBtu/hr		
17	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.00247 lb/hp-hr	300 kW	250 hr/yr	0.1 tpy
22	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.00247 lb/hp-hr	450 kW	250 hr/yr	0.2 tpy
30	Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	7.05E-04 lb/hp-hr	680 hp	250 hr/yr	0.06 tpy
35	PRB Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	7.05E-04 lb/hp-hr	1,046 hp	500 hr/yr [3]	0.2 tpy
39	Tower S Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	7.05E-04 lb/hp-hr	680 hp	500 hr/yr [3]	0.1 tpy
42	EPSS Generator 1	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	2,400 hr/yr	0.3 tpy
43	EPSS Generator 2	Diesel	Vendor Data	0.23 lb/hr	2,937 hp		
44	EPSS Generator 3	Diesel	Vendor Data	0.23 lb/hr	2,937 hp		
45	EPSS Generator 4	Diesel	Vendor Data	0.23 lb/hr	2,937 hp		
52	Boiler	Diesel	Table 1.3-1, AP-42	0.2 lb/kgal	0.872 MMBtu/hr	8,760 hr/yr	0.006 tpy
						Significant Emission Units Total Potential to Emit - VOC	**3.8 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	4.3 MMBtu/hr	8,760 hr/yr	0.10 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	23.3 MMBtu/hr	8,760 hr/yr	0.6 tpy
66	Ace Tank Distillate Storage	Diesel	See Table D-1.12	NA	1,000 gallons	8,760 hr/yr	8.21E-05 tpy
67	201 Underground Storage Tank	Diesel	See Table D-1.12	NA	2,000 gallons	8,760 hr/yr	6.39E-05 tpy
69	EPSS Storage Tank 1	Diesel	See Table D-1.12	NA	45,000 gallons	8,760 hr/yr	0.003 tpy
70	EPSS Storage Tank 2	Diesel	See Table D-1.12	NA	45,000 gallons	8,760 hr/yr	0.003 tpy
						Insignificant Emission Units Total Potential to Emit - VOC	**0.7 tpy**
						Total Potential to Emit - VOC	**4.4 tpy**

Notes:

[1] Maximum annual operation for all units based on full-time operation, or permit operating limits, where applicable.

[2] Conversion factors:

Diesel Heating Value	137,000 Btu/gal
Natural Gas Heat Content:	1,000 Btu/scf
Engine Heat Rate:	7,000 Btu/hp-hr

[3] According to a memorandum from John S. Seitz of the EPA, 500 hours of operation is an appropriate default assumption for estimating the number of hours an emergency generator could be expected to operate per year.

Table D-1.8. Potential Annual Emissions (after controls/limitations) Calculations - Sulfur Dioxide (SO_2) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	SO_2 Emission Factor	Emission Unit Rating/Capacity	Allowable Annual Operation [1]	Potential SO_2 Emissions [2]
Significant Emission Units							
1	Steam Boiler	Natural Gas	Permit Limit	12 gr S/100 scf	38.5 MMBtu/hr	1,000 MMscf/yr	17.1 tpy
2	Steam Boiler	Natural Gas	Permit Limit	12 gr S/100 scf	38.5 MMBtu/hr		
3	Steam Boiler	Natural Gas	Permit Limit	12 gr S/100 scf	49 MMBtu/hr		
4	Steam Boiler	Natural Gas	Permit Limit	12 gr S/100 scf	42.2 MMBtu/hr		
28	MOB Hub Boiler 1	Natural Gas	Permit Limit	12 gr S/100 scf	12.6 MMBtu/hr		
29	MOB Hub Boiler 2	Natural Gas	Permit Limit	12 gr S/100 scf	12.6 MMBtu/hr		
1	SB-03 Steam Boiler	Diesel	Permit Limit	0.5 pct. wt. S	38.5 MMBtu/hr	500,000 gal/yr	17.3 tpy
2	SB-04 Steam Boiler	Diesel	Permit Limit	0.5 pct. wt. S	38.5 MMBtu/hr		
3	SB-05 Steam Boiler	Diesel	Permit Limit	0.5 pct. wt. S	49.0 MMBtu/hr		
4	SB-06 Steam Boiler	Diesel	Permit Limit	0.5 pct. wt. S	42.2 MMBtu/hr		
17	Emergency Generator Engine	Diesel	Permit Limit	0.5 pct. wt. S	300 kW	250 hr/yr	0.2 tpy
22	Emergency Generator Engine	Diesel	Permit Limit	0.5 pct. wt. S	450 kW	250 hr/yr	0.3 tpy
30	Emergency Generator Engine	Diesel	Permit Limit	0.5 pct. wt. S	680 hp	250 hr/yr	0.3 tpy
35	PRB Emergency Generator Engine	Diesel	Permit Limit	0.5 pct. wt. S	1,046 hp	500 hr/yr [3]	0.9 tpy
39	Tower S Emergency Generator Engine	Diesel	Permit Limit	0.05 pct. wt. S	680 hp	500 hr/yr [3]	0.06 tpy
42	EPSS Generator 1	Diesel	Permit Limit	15 ppmw	2,937 hp	2,400 hr/yr	0.04 tpy
43	EPSS Generator 2	Diesel	Permit Limit	15 ppmw	2,937 hp		
44	EPSS Generator 3	Diesel	Permit Limit	15 ppmw	2,937 hp		
45	EPSS Generator 4	Diesel	Permit Limit	15 ppmw	2,937 hp		
						Significant Emission Units Total Potential to Emit - SO_2	**36.2 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	12 gr/100 scf	4.3 MMBtu/hr	8,760 hr/yr	0.7 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	12 gr/100 scf	23.3 MMBtu/hr	8,760 hr/yr	3.5 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gallons	8,760 hr/yr	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gallons	8,760 hr/yr	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gallons	8,760 hr/yr	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gallons	8,760 hr/yr	0 tpy
						Insignificant Emission Units Total Potential to Emit - SO_2	**4.1 tpy**
						Total Potential to Emit - SO_2	**40.3 tpy**

Notes:
[1] Maximum annual operation for all units based on full-time operation, or permit operating limits, where applicable.
[2] Conversion factors:

Diesel Heating Value	137,000 Btu/gal
Natural Gas Heat Content:	1,000 Btu/scf
Turbine Heat Rate:	8000 Btu/hp-hr
Diesel Density	6.90 lb/gal
Standard Molar Volume	385.3 scf/lb-mol
Engine Heat Rate:	7,000 Btu/hp-hr

[3] According to a memorandum from John S. Seitz of the EPA, 500 hours of operation is an appropriate default assumption for estimating the number of hours an emergency generator could be expected to operate per year.

Table D-1.9. Potential Annual Emissions (after controls/limitations) Hazardous Air Pollutants (HAP) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	HAP Emission Factor	Emission Unit Rating/Capacity	Allowable Annual Operation [1]	Potential HAP Emissions [2]
Significant Emission Units							
1	Steam Boiler	Natural Gas	See Table D-1.10	1.89 lb/MMscf	38.5 MMBtu/hr	1,000 MMscf/yr	0.9 tpy
2	Steam Boiler	Natural Gas	See Table D-1.10	1.89 lb/MMscf	38.5 MMBtu/hr		
3	Steam Boiler	Natural Gas	See Table D-1.10	1.89 lb/MMscf	49 MMBtu/hr		
4	Steam Boiler	Natural Gas	See Table D-1.10	1.89 lb/MMscf	42.2 MMBtu/hr		
28	MOB Hub Boiler 1	Natural Gas	See Table D-1.10	1.89 lb/MMscf	12.6 MMBtu/hr		
29	MOB Hub Boiler 2	Natural Gas	See Table D-1.10	1.89 lb/MMscf	12.6 MMBtu/hr		
1	SB-03 Steam Boiler	Diesel	See Table D-1.10	1.58E-01 lb/10^3Gal	38.5 MMBtu/hr	500,000 gal/yr	0.04 tpy
2	SB-04 Steam Boiler	Diesel	See Table D-1.10	1.58E-01 lb/10^3Gal	38.5 MMBtu/hr		
3	SB-05 Steam Boiler	Diesel	See Table D-1.10	1.58E-01 lb/10^3Gal	49.0 MMBtu/hr		
4	SB-06 Steam Boiler	Diesel	See Table D-1.10	1.58E-01 lb/10^3Gal	42.2 MMBtu/hr		
17	Emergency Generator Engine	Diesel	See Table D-1.10	3.87E-03 lb/MMBtu	300 kW	250 hr/yr	1.36E-03 tpy
22	Emergency Generator Engine	Diesel	See Table D-1.10	3.87E-03 lb/MMBtu	450 kW	250 hr/yr	2.05E-03 tpy
30	Emergency Generator Engine	Diesel	See Table D-1.10	1.56E-03 lb/MMBtu	680 hp	250 hr/yr	9.29E-04 tpy
35	PRB Emergency Generator Engine	Diesel	See Table D-1.10	1.56E-03 lb/MMBtu	1,046 hp	500 hr/yr [3]	2.86E-03 tpy
39	Tower S Emergency Generator Engine	Diesel	See Table D-1.10	1.56E-03 lb/MMBtu	680 hp	500 hr/yr [3]	1.86E-03 tpy
42	EPSS Generator 1	Diesel	See Table D-1.10	1.56E-03 lb/MMBtu	2,937 hp	2,400 hr/yr	0.04 tpy
43	EPSS Generator 2	Diesel	See Table D-1.10	1.56E-03 lb/MMBtu	2,937 hp		
44	EPSS Generator 3	Diesel	See Table D-1.10	1.56E-03 lb/MMBtu	2,937 hp		
45	EPSS Generator 4	Diesel	See Table D-1.10	1.56E-03 lb/MMBtu	2,937 hp		
52	Boiler	Diesel	See Table D-1.10	1.58E-01 lb/10^3Gal	0.872 MMBtu/hr	8,760 hr/yr	4.40E-03 tpy
						Significant Emission Units Total Potential to Emit - HAP	**1.0 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	See Table D-1.10	1.89 lb/MMscf	4.3 MMBtu/hr	8,760 hr/yr	0.04 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	See Table D-1.10	1.89 lb/MMscf	23.3 MMBtu/hr	8,760 hr/yr	0.2 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gallons	8,760 hr/yr	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gallons	8,760 hr/yr	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gallons	8,760 hr/yr	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gallons	8,760 hr/yr	0 tpy
						Insignificant Emission Units Total Potential to Emit - HAP	**0.2 tpy**
						Total Potential to Emit - HAP	**1.3 tpy [4]**

Notes:
[1] Maximum annual operation for all units based on full-time operation, or permit operating limits, where applicable.
[2] Conversion factors:

Diesel Heating Value	137,000 Btu/gal
Natural Gas Heat Content:	1,000 Btu/scf
Turbine Heat Rate:	8000 Btu/hp-hr
Diesel Density	6.90 lb/gal
Engine Heat Rate:	7,000 Btu/hp-hr

[3] According to a memorandum from John S. Seitz of the EPA, 500 hours of operation is an appropriate default assumption for estimating the number of hours an emergency generator could be expected to operate per year.
[4] Individual HAP estimates are not shown as the total HAP emissions are below 10 TPY

Table D-1.10. Potential Annual Emissions (after controls/limitations) - Emission Factors
Providence Health System - Providence Alaska Medical Center

Pollutant	Diesel Boilers AP-42 Tables 1.3-8, 9, & 11	Small Diesel Engines AP-42 Table 3.3-2	Large Diesel Engines AP-42 Tables 3.4-3, 4	Natural Gas Boilers/Heaters AP-42 Tables 1.4-2, 3, & 4
Acenaphthene	2.11E-05 lb/10^3 Gal	1.42E-06 lb/MMBtu	4.68E-06 lb/MMBtu	1.80E-06 lb/MMscf
Acenaphthylene	2.53E-07 lb/10^3 Gal	5.06E-06 lb/MMBtu	9.23E-06 lb/MMBtu	1.80E-06 lb/MMscf
Acetaldehyde	N A	7.67E-04 lb/MMBtu	2.52E-05 lb/MMBtu	N A
Acrolein	N A	9.25E-05 lb/MMBtu	7.88E-06 lb/MMBtu	N A
Anthracene	1.22E-06 lb/10^3 Gal	1.87E-06 lb/MMBtu	1.23E-06 lb/MMBtu	2.40E-06 lb/MMscf
Antimony	5.25E-03 lb/10^3 Gal	N A	N A	N A
Arsenic	1.32E-03 lb/10^3 Gal	N A	N A	2.00E-04 lb/MMscf
Benz(a)anthracene	4.01E-06 lb/10^3 Gal	1.68E-06 lb/MMBtu	6.22E-07 lb/MMBtu	1.80E-06 lb/MMscf
Benzene	2.14E-04 lb/10^3 Gal	9.33E-04 lb/MMBtu	7.76E-04 lb/MMBtu	2.10E-03 lb/MMscf
Benzo(a)pyrene	N A	1.88E-07 lb/MMBtu	2.57E-07 lb/MMBtu	1.20E-06 lb/MMscf
Benzo(b)fluoranthene	1.48E-06 lb/10^3 Gal	9.91E-08 lb/MMBtu	1.11E-06 lb/MMBtu	1.80E-06 lb/MMscf
Benzo(g,h,i)peylene	2.26E-06 lb/10^3 Gal	4.89E-07 lb/MMBtu	5.56E-07 lb/MMBtu	1.20E-06 lb/MMscf
Benzo(k)fluoranthene	N A	1.55E-07 lb/MMBtu	2.18E-07 lb/MMBtu	1.80E-06 lb/MMscf
Beryllium	2.78E-05 lb/10^3 Gal	N A	N A	1.20E-05 lb/MMscf
1,3-Butadiene	N A	3.91E-05 lb/MMBtu	N A	N A
Cadmium	3.98E-04 lb/10^3 Gal	N A	N A	1.10E-03 lb/MMscf
Chromium	8.45E-04 lb/10^3 Gal	N A	N A	1.40E-03 lb/MMscf
Chromium VI	2.48E-04 lb/10^3 Gal	N A	N A	N A
Chrysene	2.38E-06 lb/10^3 Gal	3.53E-07 lb/MMBtu	1.53E-06 lb/MMBtu	1.80E-06 lb/MMscf
Cobalt	6.02E-03 lb/10^3 Gal	N A	N A	8.40E-05 lb/MMscf
Dibenzo(a,h)anthracene	1.37E-06 lb/10^3 Gal	5.83E-07 lb/MMBtu	3.46E-07 lb/MMBtu	1.20E-06 lb/MMscf
1,1,1-Trichloroethane	2.36E-04 lb/10^3 Gal	N A	N A	N A
Ethylbenzene	6.36E-05 lb/10^3 Gal	N A	N A	N A
Fluoranthene	4.84E-06 lb/10^3 Gal	7.61E-06 lb/MMBtu	4.03E-06 lb/MMBtu	3.00E-06 lb/MMscf
Fluorene	4.47E-06 lb/10^3 Gal	2.92E-05 lb/MMBtu	1.28E-06 lb/MMBtu	2.80E-06 lb/MMscf
Formaldehyde	3.30E-02 lb/10^3 Gal	1.18E-03 lb/MMBtu	7.89E-05 lb/MMBtu	7.50E-02 lb/MMscf
Hexane	N A	N A	N A	1.80E+00 lb/MMscf
Indeno(1,2,3-cd)pyrene	2.14E-06 lb/10^3 Gal	3.75E-07 lb/MMBtu	4.14E-07 lb/MMBtu	1.80E-06 lb/MMscf
Lead	1.51E-03 lb/103 Gal	N A	N A	5.00E-04 lb/MMscf
Manganese	3.00E-03 lb/103 Gal	N A	N A	3.80E-04 lb/MMscf
Mercury	1.13E-04 lb/103 Gal	N A	N A	N A
Naphthalene	1.13E-03 lb/10^3 Gal	8.48E-05 lb/MMBtu	1.30E-04 lb/MMBtu	6.10E-04 lb/MMscf
Nickel	8.45E-02 lb/10^3 Gal	N A	N A	2.10E-03 lb/MMscf
Phenanathrene	1.05E-05 lb/10^3 Gal	2.94E-05 lb/MMBtu	4.08E-05 lb/MMBtu	1.70E-05 lb/MMscf
Phosphorous	9.46E-03 lb/10^3 Gal	N A	N A	N A
PAH	N A	N A	N A	N A
Polycylic Organic Matter	3.30E-03 lb/10^3 Gal	N A	N A	N A
Propylene Oxide	N A	N A	N A	N A
Pyrene	4.25E-06 lb/10^3 Gal	4.78E-06 lb/MMBtu	3.71E-06 lb/MMBtu	5.00E-06 lb/MMscf
Selenium	6.83E-04 lb/10^3 Gal	N A	N A	2.40E-05 lb/MMscf
Toluene	6.20E-03 lb/10^3 Gal	4.09E-04 lb/MMBtu	2.81E-04 lb/MMBtu	3.40E-03 lb/MMscf
Xylenes	1.09E-04 lb/10^3 Gal	2.85E-04 lb/MMBtu	1.93E-04 lb/MMBtu	N A
Total HAPs	**1.58E-01 lb/10^3 Gal**	**3.87E-03 lb/MMBtu**	**1.56E-03 lb/MMBtu**	**1.89 lb/MMscf**

Table D-1.11. Potential Annual Emissions (after controls/limitations) Greenhouse Gas Calculations - CO_{2e} Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Emission Unit Rating/Capacity	Allowable Annual Operation [1]	CO_2 Emissions [2]	CH_4 Emissions [2]	N_2O Emissions [2]	CO_2e Emissions
Significant Emission Units								
1	Steam Boiler	Natural Gas	38.5 MMBtu/hr	1,000 MMscf/yr	58,488 tpy	1.10E+00 tpy	1.10E-01 tpy	58,548 tpy
2	Steam Boiler	Natural Gas	38.5 MMBtu/hr					
3	Steam Boiler	Natural Gas	49.0 MMBtu/hr					
4	Steam Boiler	Natural Gas	42.2 MMBtu/hr					
28	MOB Hub Boiler 1	Natural Gas	12.6 MMBtu/hr					
29	MOB Hub Boiler 2	Natural Gas	12.6 MMBtu/hr					
1	SB-03 Steam Boiler	Diesel	38.5 MMBtu/hr	500,000 gal/yr	5,585 tpy	2.27E-01 tpy	4.53E-02 tpy	5,604 tpy
2	SB-04 Steam Boiler	Diesel	38.5 MMBtu/hr					
3	SB-05 Steam Boiler	Diesel	49.0 MMBtu/hr					
4	SB-06 Steam Boiler	Diesel	42.2 MMBtu/hr					
17	Emergency Generator Engine	Diesel	300 kW	250 hr/yr	57 tpy	2.33E-03 tpy	4.66E-04 tpy	58 tpy
22	Emergency Generator Engine	Diesel	450 kW	250 hr/yr	86 tpy	3.49E-03 tpy	6.98E-04 tpy	86 tpy
30	Emergency Generator Engine	Diesel	680 hp	250 hr/yr	97 tpy	3.94E-03 tpy	7.87E-04 tpy	97 tpy
35	PRB Emergency Generator Engine	Diesel	1,046 hp	500 hr/yr [3]	298 tpy	1.21E-02 tpy	2.42E-03 tpy	299 tpy
39	Tower S Emergency Generator Engine	Diesel	680 hp	500 hr/yr [3]	194 tpy	7.87E-03 tpy	1.57E-03 tpy	195 tpy
42	EPSS Generator 1	Diesel	2,937 hp	2,400 hr/yr	4,023 tpy	1.63E-01 tpy	3.26E-02 tpy	4,036 tpy
43	EPSS Generator 2	Diesel	2,937 hp					
44	EPSS Generator 3	Diesel	2,937 hp					
45	EPSS Generator 4	Diesel	2,937 hp					
52	Boiler	Diesel	0.872 MMBtu/hr	8,760 hr/yr	623 tpy	2.53E-02 tpy	5.05E-03 tpy	625 tpy
							Significant Emission Units Total Assessable Potential to Emit - CO_2e	**69,549 tpy**
Insignificant Emission Units								
	Various Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	4.3 MMBtu/hr, total	8,760 hr/yr	2,221 tpy	4.19E-02 tpy	4.19E-03 tpy	2,223 tpy
	Various Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	24.3 MMBtu/hr, total	8,760 hr/yr	12,435 tpy	2.34E-01 tpy	2.34E-02 tpy	12,448 tpy
66	Ace Tank Distillate Storage	Diesel	1,000 gallons	8,760 hr/yr	0 tpy	0 tpy	0 tpy	0 tpy
67	201 Underground Storage Tank	Diesel	2,000 gallons	8,760 hr/yr	0 tpy	0 tpy	0 tpy	0 tpy
69	EPSS Storage Tank 1	Diesel	45,000 gallons	8,760 hr/yr	0 tpy	0 tpy	0 tpy	0 tpy
70	EPSS Storage Tank 2	Diesel	45,000 gallons	8,760 hr/yr	0 tpy	0 tpy	0 tpy	0 tpy
							Insignificant Emission Units Total Assessable Potential to Emit - CO_2e	**1.47E+04 tpy**
							Total Assessable Potential to Emit - CO_2e	**8.42E+04 tpy**

Notes:
[1] Maximum annual operation for all units based on full-time operation, or permit operating limits, where applicable.
[2] Conversion factors:

Diesel Heating Value	137,000	Btu/gal
Natural Gas Heat Content:	1,000	Btu/scf
Turbine Heat Rate:	8,000	Btu/hp-hr
Diesel Density	6.90	lb/gal
Engine Heat Rate:	7,000	Btu/hp-hr

[3] According to a memorandum from John S. Seitz of the EPA, 500 hours of operation is an appropriate default assumption for estimating the number of hours an emergency generator could be expected to operate per year.

GHG Emission Factors (kg/MMBtu):	Fuel Gas	Diesel	GWP
CO_2	53.06	73.96	1
CH_4	1.00E-03	3.00E-03	25
N_2O	1.00E-04	6.00E-04	298

Table D-1.12 Potential Annual Emissions (after controls/limitations) Tank Emissions - VOC Emissions
Providence Health System - Providence Alaska Medical Center

Parameter	Factor Reference	Emissions Unit ID			
		66	67	69	70
Orientation	NA	Horizontal	Horizontal UST	Vertical	Vertical
Contents	NA	Diesel	Diesel	Diesel	Diesel
Diameter (ft)	NA	6	12	15	15
Tank Height (ft), H_S	NA	5	5	40	40
Color	NA	White	White	White	White
Maximum Liquid Height (ft), H_L	NA	4	4	35	35
Capacity (gal)	NA	1,000	2,000	45,000	45,000
Throughput (gal/yr) [1]	NA	1,000	2,000	45,000	45,000
Turnovers [4]	NA	1	1	1	1
Paint Condition	NA	Average	Average	Average	Average
Standing Loss (L_S) Calculations [3]					
K_E	AP-42, Section 7.1, Equation 1-12	0.019	0.019	0.019	0.019
H_{VO} (ft)	AP-42, Section 7.1, Equation 1-16	1.06	1.13	5.16	5.16
H_{RO} (ft)	AP-42, Section 7.1, Equation 1-17	0.06	0.13	0.16	0.16
K_S	AP-42, Section 7.1, Equation 1-21	1.000	1.000	0.998	0.998
T_{AA} (^oR)	AP-42, Section 7.1, Equation 1-30	497.60	497.60	497.60	497.60
T_B (^oR)	AP-42, Section 7.1, Equation 1-31	498.23	498.23	498.23	498.23
T_V (^oR) - uninsulated	AP-42, Section 7.1, Equation 1-33	152.05	152.05	152.05	152.05
W_V (lb/ft^3)	AP-42, Section 7.1, Equation 1-22	4.78E-04	4.78E-04	4.78E-04	4.78E-04
L_S (lb/yr)	AP-42, Section 7.1, Equation 1-4	0.10	0	3.04	3.04
Working Loss (L_W) Calculations [3]					
Q (bbl/yr)	NA	24	48	1,071	1,071
V_O (ft^3)	AP-42, Section 7.1, Equation 1-39	134	267	6,015	6,015
K_N [4]	AP-42, Section 7.1, Equation 1-35	1.00	1.00	1.00	1.00
L_W (lb/yr)	AP-42, Section 7.1, Equation 1-35	0.1	0.1	2.9	2.9
TOTAL VOCs L_T (tpy)	**AP-42, Section 7.1, Equation 1-1**	**8.21E-05**	**6.39E-05**	**0.003**	**0.003**

Note:
[1] Tanks are filled with submerged loading.
[2] EU ID 67 is conservatively estimated as an above ground storage tank.
[3] Meteorological Inputs (Anchorage, AK):

	T_{AX} =	42.5	^oF	502.2 ^oK
AP-42, Section 7.1, Table 7.1-6	T_{AN} =	33.3	^oF	493.0 ^oK
AP-42, Section 7.1, Table 7.1-7	α =	0.25	White, Average	
From the 1995 version of AP-42	I =	838	Btu/ft^2-d	
Constants:				
AP-42, Section 7.1, Table 7.1-2 (diesel/distillate)				
AP-42, Section 7.1, Table 7.1-2	M_V (diesel)=	130	lb/lb-mol	
AP-42, Section 7.1, Note below equation 1-37	P_{VA} (diesel)=	0.006	psi	
AP-42, Section 7.1, Note below equation 1-37	K_P (diesel)=	1		
	K_B =	1		

[4] K_N is equal to 1 for 36 or less turnovers per year

Table D-2.1. Potential to Emit (before controls/limitations) Emissions Summary
Providence Health System - Providence Alaska Medical Center

Emission Unit Type	Regulated Air Pollutant Emissions (tons per year) [1,2]							
	NO_X	CO	PM_{10}	$PM_{2.5}$ [3]	VOC	SO_2	HAP [4]	GHG (CO_2e) [5]
Significant	1,242.2	218.8	36.6	36.6	27.0	420.5	8.3	210,131
Insignificant	11.6	9.3	0.9	0.9	0.6	4.0	0.2	13,646
Total Potential to Emit Emissions	**1,253.8**	**228.1**	**37.5**	**37.5**	**27.7**	**424.5**	**8.5**	**223,776.9**

Notes:

[1] Emissions are unlimited potential to emit.

[2] Regulated air pollutant calculations based on AP-42 emission factors, manufacturer data, and mass balances as shown in accompanying spreadsheets.

[3] PM_{10} emissions are assumed to equal $PM_{2.5}$ emissions.

[4] HAP emissions are a subset of either VOC emissions or PM_{10} emissions and are excluded from the total.

[5] GHG means greenhouse gases and is the summation of CO_2, CH_4, and N_2O and applying the global warming potential for each pollutant.

Table D-2.2. Potential to Emit (before controls/limitations) Calculations - Oxides of Nitrogen (NO_X) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	NO_X Emission Factor	Emission Unit Rating/Capacity	Potential Annual Operation [1]	Potential NO_X Emissions [2]
Significant Emission Units							
1	SB-03 Steam Boiler	Diesel [3]	Table 1.3-1, AP-42	20 lb/kgal	38.5 MMBtu/hr	8,760 hr/yr	24.6 tpy
2	SB-04 Steam Boiler	Diesel [3]	Table 1.3-1, AP-42	20 lb/kgal	38.5 MMBtu/hr	8,760 hr/yr	24.6 tpy
3	SB-05 Steam Boiler	Diesel [3]	Table 1.3-1, AP-42	20 lb/kgal	49.0 MMBtu/hr	8,760 hr/yr	31.3 tpy
4	SB-06 Steam Boiler	Diesel [3]	Table 1.3-1, AP-42	20 lb/kgal	42.2 MMBtu/hr	8,760 hr/yr	27.0 tpy
17	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.031 lb/hp-hr	300 kW	8,760 hr/yr	54.6 tpy
22	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.031 lb/hp-hr	450 kW	8,760 hr/yr	81.9 tpy
28	MOB Hub Boiler 1	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	12.6 MMBtu/hr	8,760 hr/yr	5.5 tpy
29	MOB Hub Boiler 2	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	12.6 MMBtu/hr	8,760 hr/yr	5.5 tpy
30	Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.024 lb/hp-hr	680 hp	8,760 hr/yr	71.5 tpy
35	PRB Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.024 lb/hp-hr	1,046 hp	8,760 hr/yr	110.0 tpy
39	Tower S Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.024 lb/hp-hr	680 hp	8,760 hr/yr	71.5 tpy
42	EPSS Generator 1	Diesel	Vendor Data	41.9 lb/hr	2,937 hp	8,760 hr/yr	183.4 tpy
43	EPSS Generator 2	Diesel	Vendor Data	41.9 lb/hr	2,937 hp	8,760 hr/yr	183.4 tpy
44	EPSS Generator 3	Diesel	Vendor Data	41.9 lb/hr	2,937 hp	8,760 hr/yr	183.4 tpy
45	EPSS Generator 4	Diesel	Vendor Data	41.9 lb/hr	2,937 hp	8,760 hr/yr	183.4 tpy
52	Boiler	Diesel	Table 1.3-1, AP-42	20.0 lb/kgal	0.872 MMBtu/hr	8,760 hr/yr	0.6 tpy
						Significant Emission Units Total Potential to Emit - NO_X	**1,242.2 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-1, AP-42	94 lb/MMscf	2.3 MMBtu/hr	8,760 hr/yr	1.0 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	24.3 MMBtu/hr	8,760 hr/yr	10.6 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gal	8,760 hr/yr	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gal	8,760 hr/yr	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gal	8,760 hr/yr	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gal	8,760 hr/yr	0 tpy
						Insignificant Emission Units Total Potential to Emit - NO_X	**11.6 tpy**
						Total Potential to Emit - NO_X	**1,253.8 tpy**

Notes:

[1] Maximum annual operation for all units based on full-time operation to calculate unlimited potential emissions.

[2] Conversion factors:

Diesel Heating Value	137,000	Btu/gal
Natural Gas Heat Content:	1,000	Btu/scf
Engine Heat Rate:	7,000	Btu/hp-hr

[3] Potential emissions for EU IDs 1-4 are highest when operating on diesel, therefore full time operation on diesel is assumed for the purpose of calculating unlimited potential emissions.

Table D-2.3. Potential to Emit (before controls/limitations) Calculations - Carbon Monoxide (CO) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	CO Emission Factor	Emission Unit Rating/Capacity	Potential Annual Operation [1]	Potential CO Emissions [2]
Significant Emission Units							
1	SB-03 Steam Boiler	Diesel [3]	Table 1.4-1, AP-42	84 lb/MMscf	38.5 MMBtu/hr	8,760 hr/yr	14.2 tpy
2	SB-04 Steam Boiler	Diesel [3]	Table 1.4-1, AP-42	84 lb/MMscf	38.5 MMBtu/hr	8,760 hr/yr	14.2 tpy
3	SB-05 Steam Boiler	Diesel [3]	Table 1.4-1, AP-42	84 lb/MMscf	49.0 MMBtu/hr	8,760 hr/yr	18.0 tpy
4	SB-06 Steam Boiler	Diesel [3]	Table 1.4-1, AP-42	84 lb/MMscf	42.2 MMBtu/hr	8,760 hr/yr	15.5 tpy
17	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.00668 lb/hp-hr	300 kW	8,760 hr/yr	11.8 tpy
22	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.00668 lb/hp-hr	450 kW	8,760 hr/yr	17.7 tpy
28	MOB Hub Boiler 1	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	12.6 MMBtu/hr	8,760 hr/yr	4.6 tpy
29	MOB Hub Boiler 2	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	12.6 MMBtu/hr	8,760 hr/yr	4.6 tpy
30	Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.0055 lb/hp-hr	680 hp	8,760 hr/yr	16.4 tpy
35	PRB Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.0055 lb/hp-hr	1,046 hp	8,760 hr/yr	25.2 tpy
39	Tower S Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.0055 lb/hp-hr	680 hp	8,760 hr/yr	16.4 tpy
42	EPSS Generator 1	Diesel	Vendor Data	3.43 lb/hr	2,937 hp	8,760 hr/yr	15.0 tpy
43	EPSS Generator 2	Diesel	Vendor Data	3.43 lb/hr	2,937 hp	8,760 hr/yr	15.0 tpy
44	EPSS Generator 3	Diesel	Vendor Data	3.43 lb/hr	2,937 hp	8,760 hr/yr	15.0 tpy
45	EPSS Generator 4	Diesel	Vendor Data	3.43 lb/hr	2,937 hp	8,760 hr/yr	15.0 tpy
52	Boiler	Diesel	Table 1.3-1, AP-42	5 lb/kgal	0.872 MMBtu/hr	8,760 hr/yr	0.1 tpy
						Significant Emission Units Total Potential to Emit - CO	**218.8 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-1, AP-42	40 lb/MMscf	2.3 MMBtu/hr	8,760 hr/yr	0.4 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	24.3 MMBtu/hr	8,760 hr/yr	8.9 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gal	8,760 hr/yr	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gal	8,760 hr/yr	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gal	8,760 hr/yr	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gal	8,760 hr/yr	0 tpy
						Insignificant Emission Units Total Potential to Emit - CO	**9.3 tpy**
						Total Potential to Emit - CO	**228.1 tpy**

Notes:

[1] Maximum annual operation for all units based on full-time operation to calculate unlimited potential emissions.

[2] Conversion factors:

Diesel Heating Value	137,000	Btu/gal
Natural Gas Heat Content:	1,000	Btu/scf
Engine Heat Rate:	7,000	Btu/hp-hr

[3] Potential emissions for EU IDs 1-4 are highest when operating on natural gas, therefore full time operation on natural gas is assumed for the purpose of calculating unlimited potential emissions.

Table D-2.4. Potential to Emit (before controls/limitations) Calculations - Particulate Matter Less Than 10 Microns (PM_{10}) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	PM_{10} Emission Factor	Emission Unit Rating/Capacity	Potential Annual Operation [1]	Potential PM_{10} Emissions [2]
Significant Emission Units							
1	SB-03 Steam Boiler	Diesel [3]	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/kgal	38.5 MMBtu/hr	8,760 hr/yr	4.1 tpy
2	SB-04 Steam Boiler	Diesel [3]	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/kgal	38.5 MMBtu/hr	8,760 hr/yr	4.1 tpy
3	SB-05 Steam Boiler	Diesel [3]	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/kgal	49.0 MMBtu/hr	8,760 hr/yr	5.2 tpy
4	SB-06 Steam Boiler	Diesel [3]	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/kgal	42.2 MMBtu/hr	8,760 hr/yr	4.5 tpy
17	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.0022 lb/hp-hr	300 kW	8,760 hr/yr	3.9 tpy
22	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.0022 lb/hp-hr	450 kW	8,760 hr/yr	5.8 tpy
28	MOB Hub Boiler 1	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	12.6 MMBtu/hr	8,760 hr/yr	0.4 tpy
29	MOB Hub Boiler 2	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	12.6 MMBtu/hr	8,760 hr/yr	0.4 tpy
30	Emergency Generator Engine	Diesel	Table 3.4-2, AP-42	0.0573 lb/MMBtu	680 hp	8,760 hr/yr	1.2 tpy
35	PRB Emergency Generator Engine	Diesel	Table 3.4-2, AP-42	0.0573 lb/MMBtu	1,046 hp	8,760 hr/yr	1.8 tpy
39	Tower S Emergency Generator Engine	Diesel	Table 3.4-2, AP-42	0.0573 lb/MMBtu	680 hp	8,760 hr/yr	1.2 tpy
42	EPSS Generator 1	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	8,760 hr/yr	1.0 tpy
43	EPSS Generator 2	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	8,760 hr/yr	1.0 tpy
44	EPSS Generator 3	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	8,760 hr/yr	1.0 tpy
45	EPSS Generator 4	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	8,760 hr/yr	1.0 tpy
52	Boiler	Diesel	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/kgal	0.872 MMBtu/hr	8,760 hr/yr	0.1 tpy
						Significant Emission Units Total Potential to Emit - PM_{10}	**36.6 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	2.3 MMBtu/hr	8,760 hr/yr	0.1 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	24.3 MMBtu/hr	8,760 hr/yr	0.8 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gal	8,760 hr/yr	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gal	8,760 hr/yr	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gal	8,760 hr/yr	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gal	8,760 hr/yr	0 tpy
						Insignificant Emission Units Total Potential to Emit - PM_{10}	**0.9 tpy**
						Total Potential to Emit - PM_{10}	**37.5 tpy**

Notes:

[1] Maximum annual operation for all units based on full-time operation to calculate unlimited potential emissions.

[2] Conversion factors:

Diesel Heating Value	137,000	Btu/gal
Natural Gas Heat Content:	1,000	Btu/scf
Engine Heat Rate:	7,000	Btu/hp-hr

[3] Potential emissions for EU IDs 1-4 are highest when operating on diesel, therefore full time operation on diesel is assumed for the purpose of calculating unlimited potential emissions.

Table D-2.5. Potential to Emit (before controls/limitations) Calculations - Volatile Organic Compounds (VOC) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	VOC Emission Factor	Emission Unit Rating/Capacity	Potential Annual Operation [1]	Potential VOC Emissions [2]
Significant Emission Units							
1	SB-03 Steam Boiler	Diesel [3]	Table 1.4-2, AP-42	5.5 lb/MMscf	38.5 MMBtu/hr	8,760 hr/yr	0.9 tpy
2	SB-04 Steam Boiler	Diesel [3]	Table 1.4-2, AP-42	5.5 lb/MMscf	38.5 MMBtu/hr	8,760 hr/yr	0.9 tpy
3	SB-05 Steam Boiler	Diesel [3]	Table 1.4-2, AP-42	5.5 lb/MMscf	49.0 MMBtu/hr	8,760 hr/yr	1.2 tpy
4	SB-06 Steam Boiler	Diesel [3]	Table 1.4-2, AP-42	5.5 lb/MMscf	42.2 MMBtu/hr	8,760 hr/yr	1.0 tpy
17	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.00247 lb/hp-hr	300 kW	8,760 hr/yr	4.4 tpy
22	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.00247 lb/hp-hr	450 kW	8,760 hr/yr	6.5 tpy
28	MOB Hub Boiler 1	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	12.6 MMBtu/hr	8,760 hr/yr	0.3 tpy
29	MOB Hub Boiler 2	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	12.6 MMBtu/hr	8,760 hr/yr	0.3 tpy
30	Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	7.05E-04 lb/hp-hr	680 hp	8,760 hr/yr	2.1 tpy
35	PRB Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	7.05E-04 lb/hp-hr	1,046 hp	8,760 hr/yr	3.2 tpy
39	Tower S Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	7.05E-04 lb/hp-hr	680 hp	8,760 hr/yr	2.1 tpy
42	EPSS Generator 1	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	8,760 hr/yr	1.0 tpy
43	EPSS Generator 2	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	8,760 hr/yr	1.0 tpy
44	EPSS Generator 3	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	8,760 hr/yr	1.0 tpy
45	EPSS Generator 4	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	8,760 hr/yr	1.0 tpy
52	Boiler	Diesel	Table 1.3-1, AP-42	0.2 lb/kgal	0.872 MMBtu/hr	8,760 hr/yr	0.006 tpy
						Significant Emission Units Total Potential to Emit - VOC	**27.0 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	2.3 MMBtu/hr	8,760 hr/yr	0.06 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	24.3 MMBtu/hr	8,760 hr/yr	0.6 tpy
66	Ace Tank Distillate Storage	Diesel	See Table D-2.10	NA	1,000 gal	8,760 hr/yr	8.21E-05 tpy
67	201 Underground Storage Tank	Diesel	See Table D-2.10	NA	2,000 gal	8,760 hr/yr	6.39E-05 tpy
69	EPSS Storage Tank 1	Diesel	See Table D-2.10	NA	45,000 gal	8,760 hr/yr	0.003 tpy
70	EPSS Storage Tank 2	Diesel	See Table D-2.10	NA	45,000 gal	8,760 hr/yr	0.003 tpy
						Insignificant Emission Units Total Potential to Emit - VOC	**0.6 tpy**
						Total Potential to Emit - VOC	**27.7 tpy**

Notes:

[1] Maximum annual operation for all units based on full-time operation to calculate unlimited potential emissions.

[2] Conversion factors:

Diesel Heating Value	137,000 Btu/gal
Natural Gas Heat Content:	1,000 Btu/scf
Engine Heat Rate:	7,000 Btu/hp-hr

[3] Potential emissions for EU IDs 1-4 are highest when operating on natural gas, therefore full time operation on natural gas is assumed for the purpose of calculating unlimited potential emissions.

Table D-2.6. Potential to Emit (before controls/limitations) Calculations - Sulfur Dioxide (SO_2) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	SO_2 Emission Factor	Emission Unit Rating/Capacity	Potential Annual Operation [1]	Potential SO_2 Emissions [2]
Significant Emission Units							
1	SB-03 Steam Boiler	Diesel [3]	Permit Limit	0.5 pct. wt. S	38.5 MMBtu/hr	8,760 hr/yr	84.9 tpy
2	SB-04 Steam Boiler	Diesel [3]	Permit Limit	0.5 pct. wt. S	38.5 MMBtu/hr	8,760 hr/yr	84.9 tpy
3	SB-05 Steam Boiler	Diesel [3]	Permit Limit	0.5 pct. wt. S	49.0 MMBtu/hr	8,760 hr/yr	108.1 tpy
4	SB-06 Steam Boiler	Diesel [3]	Permit Limit	0.5 pct. wt. S	42.2 MMBtu/hr	8,760 hr/yr	93.1 tpy
17	Emergency Generator Engine	Diesel	Permit Limit	0.5 pct. wt. S	300 kW	8,760 hr/yr	6.21 tpy
22	Emergency Generator Engine	Diesel	Permit Limit	0.5 pct. wt. S	450 kW	8,760 hr/yr	9.32 tpy
28	MOB Hub Boiler 1	Natural Gas	Permit Limit	12 gr S/100 scf	12.6 MMBtu/hr	8,760 hr/yr	1.9 tpy
29	MOB Hub Boiler 2	Natural Gas	Permit Limit	12 gr S/100 scf	12.6 MMBtu/hr	8,760 hr/yr	1.9 tpy
30	Emergency Generator Engine	Diesel	Permit Limit	0.5 pct. wt. S	680 hp	8,760 hr/yr	10.50 tpy
35	PRB Emergency Generator Engine	Diesel	Permit Limit	0.5 pct. wt. S	1,046 hp	8,760 hr/yr	16.15 tpy
39	Tower S Emergency Generator Engine	Diesel	Permit Limit	0.05 pct. wt. S	680 hp	8,760 hr/yr	1.05 tpy
42	EPSS Generator 1	Diesel	Permit Limit	15 ppmw	2,937 hp	8,760 hr/yr	0.14 tpy
43	EPSS Generator 2	Diesel	Permit Limit	15 ppmw	2,937 hp	8,760 hr/yr	0.14 tpy
44	EPSS Generator 3	Diesel	Permit Limit	15 ppmw	2,937 hp	8,760 hr/yr	0.14 tpy
45	EPSS Generator 4	Diesel	Permit Limit	15 ppmw	2,937 hp	8,760 hr/yr	0.14 tpy
52	Boiler	Diesel	Permit Limit	0.5 pct. wt. S	0.872 MMBtu/hr	8,760 hr/yr	1.92 tpy
						Significant Emission Units Total Potential to Emit - SO_2	**420.5 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	12 gr/100 scf	2.3 MMBtu/hr	8,760 hr/yr	0.35 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	12 gr/100 scf	24.3 MMBtu/hr	8,760 hr/yr	3.64 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gal	8,760 hr/yr	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gal	8,760 hr/yr	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gal	8,760 hr/yr	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gal	8,760 hr/yr	0 tpy
						Insignificant Emission Units Total Potential to Emit - SO_2	**4.0 tpy**
						Total Potential to Emit - SO_2	**424.5 tpy**

Notes:

[1] Maximum annual operation for all units based on full-time operation to calculate unlimited potential emissions.

[2] Conversion factors:

Diesel Heating Value	137,000	Btu/gal
Natural Gas Heat Content:	1,000	Btu/scf
Turbine Heat Rate:	8,000	Btu/hp-hr
Diesel Density	6.90	lb/gal
Standard Molar Volume	385.3	scf/lb-mol
Engine Heat Rate:	7,000	Btu/hp-hr

[3] Potential emissions for EU IDs 1-4 are highest when operating on diesel, therefore full time operation on diesel is assumed for the purpose of calculating unlimited potential emissions.

Table D-2.7. Potential to Emit (before controls/limitations) Hazardous Air Pollutants (HAP) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	HAP Emission Factor	Emission Unit Rating/Capacity	Allowable Annual Operation [1]	Potential HAP Emissions [2,4]
Significant Emission Units							
1	SB-03 Steam Boiler	Natural Gas [3]	See Table D-1.11	1.89 lb/MMscf	38.5 MMBtu/hr	8,760 hr/yr	0.3 tpy
2	SB-04 Steam Boiler	Natural Gas [3]	See Table D-1.11	1.89 lb/MMscf	38.5 MMBtu/hr	8,760 hr/yr	0.3 tpy
3	SB-05 Steam Boiler	Natural Gas [3]	See Table D-1.11	1.89 lb/MMscf	49.0 MMBtu/hr	8,760 hr/yr	0.4 tpy
4	SB-06 Steam Boiler	Natural Gas [3]	See Table D-1.11	1.89 lb/MMscf	42.2 MMBtu/hr	8,760 hr/yr	0.3 tpy
17	Emergency Generator Engine	Natural Gas	See Table D-1.11	1.89 lb/MMscf	300 kW	8,760 hr/yr	2.5 tpy
22	Emergency Generator Engine	Natural Gas	See Table D-1.11	1.89 lb/MMscf	450 kW	8,760 hr/yr	3.7 tpy
28	MOB Hub Boiler 1	Natural Gas	See Table D-1.11	3.87E-03 lb/MMBtu	12.6 MMBtu/hr	8,760 hr/yr	0.00 tpy
29	MOB Hub Boiler 2	Natural Gas	See Table D-1.11	3.87E-03 lb/MMBtu	12.6 MMBtu/hr	8,760 hr/yr	0.00 tpy
30	Emergency Generator Engine	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	680 hp	8,760 hr/yr	0.03 tpy
35	PRB Emergency Generator Engine	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	1,046 hp	8,760 hr/yr	0.05 tpy
39	Tower S Emergency Generator Engine	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	680 hp	8,760 hr/yr	0.03 tpy
42	EPSS Generator 1	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	2,937 hp	8,760 hr/yr	0.14 tpy
43	EPSS Generator 2	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	2,937 hp	8,760 hr/yr	0.14 tpy
44	EPSS Generator 3	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	2,937 hp	8,760 hr/yr	0.14 tpy
45	EPSS Generator 4	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	2,937 hp	8,760 hr/yr	0.14 tpy
52	Boiler	Diesel	See Table D-1.11	1.58E-01 lb/10^{3}Gal	0.872 MMBtu/hr	8,760 hr/yr	0.004 tpy
						Significant Emission Units Total Potential to Emit - HAP	**8.3 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	See Table D-1.11	1.89 lb/MMscf	2.3 MMBtu/hr	8,760 hr/yr	0.02 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	See Table D-1.11	1.89 lb/MMscf	24.3 MMBtu/hr	8,760 hr/yr	0.2 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gal	8,760 hr/yr	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gal	8,760 hr/yr	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gal	8,760 hr/yr	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gal	8,760 hr/yr	0 tpy
						Insignificant Emission Units Total Potential to Emit - HAP	**0.2 tpy**
						Total Potential to Emit - HAP	**8.5 tpy**

Notes:
[1] Maximum annual operation for all units based on full-time operation, or permit operating limits, where applicable.
[2] Conversion factors:

Diesel Heating Value	137,000	Btu/gal
Natural Gas Heat Content:	1,000	Btu/scf
Turbine Heat Rate:	8000	Btu/hp-hr
Diesel Density	6.90	lb/gal
Engine Heat Rate:	7,000	Btu/hp-hr

[3] Potential emissions for EU IDs 1-4 are highest when operating on natural gas, therefore full time operation on fuel gas is assumed for the purpose of calculating unlimited potential emissions.
[4] Individual HAP estimates are not shown as the total HAP emissions are below 10 TPY.

Table D-2.8. Potential to Emit (before controls/limitations) - Hazardous Air Pollutants (HAP) Emission Factors
Providence Health System - Providence Alaska Medical Center

Pollutant	Diesel Boilers AP-42 Tables 1.3-8, 9, & 11	Small Diesel Engines AP-42 Table 3.3-2	Large Diesel Engines AP-42 Tables 3.4-3, 4	Natural Gas Boilers/Heaters AP-42 Tables 1.4-2, 3, & 4
Acenaphthene	2.11E-05 lb/10^3 Gal	1.42E-06 lb/MMBtu	4.68E-06 lb/MMBtu	1.80E-06 lb/MMscf
Acenaphthylene	2.53E-07 lb/10^3 Gal	5.06E-06 lb/MMBtu	9.23E-06 lb/MMBtu	1.80E-06 lb/MMscf
Acetaldehyde	N A	7.67E-04 lb/MMBtu	2.52E-05 lb/MMBtu	N A
Acrolein	N A	9.25E-05 lb/MMBtu	7.88E-06 lb/MMBtu	N A
Anthracene	1.22E-06 lb/10^3 Gal	1.87E-06 lb/MMBtu	1.23E-06 lb/MMBtu	2.40E-06 lb/MMscf
Antimony	5.25E-03 lb/10^3 Gal	N A	N A	N A
Arsenic	1.32E-03 lb/10^3 Gal	N A	N A	2.00E-04 lb/MMscf
Benz(a)anthracene	4.01E-06 lb/10^3 Gal	1.68E-06 lb/MMBtu	6.22E-07 lb/MMBtu	1.80E-06 lb/MMscf
Benzene	2.14E-04 lb/10^3 Gal	9.33E-04 lb/MMBtu	7.76E-04 lb/MMBtu	2.10E-03 lb/MMscf
Benzo(a)pyrene	N A	1.88E-07 lb/MMBtu	2.57E-07 lb/MMBtu	1.20E-06 lb/MMscf
Benzo(b)fluoranthene	1.48E-06 lb/10^3 Gal	9.91E-08 lb/MMBtu	1.11E-06 lb/MMBtu	1.80E-06 lb/MMscf
Benzo(g,h,i)peylene	2.26E-06 lb/10^3 Gal	4.89E-07 lb/MMBtu	5.56E-07 lb/MMBtu	1.20E-06 lb/MMscf
Benzo(k)fluoranthene	N A	1.55E-07 lb/MMBtu	2.18E-07 lb/MMBtu	1.80E-06 lb/MMscf
Beryllium	2.78E-05 lb/10^3 Gal	N A	N A	1.20E-05 lb/MMscf
1,3-Butadiene	N A	3.91E-05 lb/MMBtu	N A	N A
Cadmium	3.98E-04 lb/10^3 Gal	N A	N A	1.10E-03 lb/MMscf
Chromium	8.45E-04 lb/10^3 Gal	N A	N A	1.40E-03 lb/MMscf
Chromium VI	2.48E-04 lb/10^3 Gal	N A	N A	N A
Chrysene	2.38E-06 lb/10^3 Gal	3.53E-07 lb/MMBtu	1.53E-06 lb/MMBtu	1.80E-06 lb/MMscf
Cobalt	6.02E-03 lb/10^3 Gal	N A	N A	8.40E-05 lb/MMscf
Dibenzo(a,h)anthracene	1.37E-06 lb/10^3 Gal	5.83E-07 lb/MMBtu	3.46E-07 lb/MMBtu	1.20E-06 lb/MMscf
1,1,1-Trichloroethane	2.36E-04 lb/10^3 Gal	N A	N A	N A
Ethylbenzene	6.36E-05 lb/10^3 Gal	N A	N A	N A
Fluoranthene	4.84E-06 lb/10^3 Gal	7.61E-06 lb/MMBtu	4.03E-06 lb/MMBtu	3.00E-06 lb/MMscf
Fluorene	4.47E-06 lb/10^3 Gal	2.92E-05 lb/MMBtu	1.28E-06 lb/MMBtu	2.80E-06 lb/MMscf
Formaldehyde	3.30E-02 lb/10^3 Gal	1.18E-03 lb/MMBtu	7.89E-05 lb/MMBtu	7.50E-02 lb/MMscf
Hexane	N A	N A	N A	1.80E+00 lb/MMscf
Indeno(1,2,3-cd)pyrene	2.14E-06 lb/10^3 Gal	3.75E-07 lb/MMBtu	4.14E-07 lb/MMBtu	1.80E-06 lb/MMscf
Lead	1.51E-03 lb/103 Gal	N A	N A	5.00E-04 lb/MMscf
Manganese	3.00E-03 lb/103 Gal	N A	N A	3.80E-04 lb/MMscf
Mercury	1.13E-04 lb/103 Gal	N A	N A	N A
Naphthalene	1.13E-03 lb/10^3 Gal	8.48E-05 lb/MMBtu	1.30E-04 lb/MMBtu	6.10E-04 lb/MMscf
Nickel	8.45E-02 lb/10^3 Gal	N A	N A	2.10E-03 lb/MMscf
Phenanathrene	1.05E-05 lb/10^3 Gal	2.94E-05 lb/MMBtu	4.08E-05 lb/MMBtu	1.70E-05 lb/MMscf
Phosphorous	9.46E-03 lb/10^3 Gal	N A	N A	N A
PAH	N A	N A	N A	N A
Polycylic Organic Matter	3.30E-03 lb/10^3 Gal	N A	N A	N A
Propylene Oxide	N A	N A	N A	N A
Pyrene	4.25E-06 lb/10^3 Gal	4.78E-06 lb/MMBtu	3.71E-06 lb/MMBtu	5.00E-06 lb/MMscf
Selenium	6.83E-04 lb/10^3 Gal	N A	N A	2.40E-05 lb/MMscf
Toluene	6.20E-03 lb/10^3 Gal	4.09E-04 lb/MMBtu	2.81E-04 lb/MMBtu	3.40E-03 lb/MMscf
Xylenes	1.09E-04 lb/10^3 Gal	2.85E-04 lb/MMBtu	1.93E-04 lb/MMBtu	N A
Total HAPs	**1.58E-01 lb/10^3 Gal**	**3.87E-03 lb/MMBtu**	**1.56E-03 lb/MMBtu**	**1.89 lb/MMscf**

Table D-2.9. Potential to Emit (before controls/limitations) Greenhouse Gas Calculations - CO_{2e} Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Emission Unit Rating/Capacity	Potential Annual Operation [1]	CO_2 Emissions [2]	CH_4 Emissions [2]	N_2O Emissions [2]	CO_2e Emissions
Significant Emission Units								
1	SB-03 Steam Boiler	Diesel [3]	38.5 MMBtu/hr	8,760 hr/yr	27,495 tpy	1.12E+00 tpy	2.23E-01 tpy	27,590 tpy
2	SB-04 Steam Boiler	Diesel [3]	38.5 MMBtu/hr	8,760 hr/yr	27,495 tpy	1.12E+00 tpy	2.23E-01 tpy	27,590 tpy
3	SB-05 Steam Boiler	Diesel [3]	49.0 MMBtu/hr	8,760 hr/yr	34,994 tpy	1.42E+00 tpy	2.84E-01 tpy	35,114 tpy
4	SB-06 Steam Boiler	Diesel [3]	42.2 MMBtu/hr	8,760 hr/yr	30,138 tpy	1.22E+00 tpy	2.44E-01 tpy	30,241 tpy
17	Emergency Generator Engine	Diesel	300 kW	8,760 hr/yr	2,011 tpy	8.16E-02 tpy	1.63E-02 tpy	2,018 tpy
22	Emergency Generator Engine	Diesel	450 kW	8,760 hr/yr	3,017 tpy	1.22E-01 tpy	2.45E-02 tpy	3,027 tpy
28	MOB Hub Boiler 1	Natural Gas	12.6 MMBtu/hr	8,760 hr/yr	6,456 tpy	1.22E-01 tpy	1.22E-02 tpy	6,462 tpy
29	MOB Hub Boiler 2	Natural Gas	12.6 MMBtu/hr	8,760 hr/yr	6,456 tpy	1.22E-01 tpy	1.22E-02 tpy	6,462 tpy
30	Emergency Generator Engine	Diesel	680 hp	8,760 hr/yr	3,399 tpy	1.38E-01 tpy	2.76E-02 tpy	3,411 tpy
35	PRB Emergency Generator Engine	Diesel	1,046 hp	8,760 hr/yr	5,229 tpy	2.12E-01 tpy	4.24E-02 tpy	5,247 tpy
39	Tower S Emergency Generator Engine	Diesel	680 hp	8,760 hr/yr	3,399 tpy	1.38E-01 tpy	2.76E-02 tpy	3,411 tpy
42	EPSS Generator 1	Diesel	2,937 hp	8,760 hr/yr	14,683 tpy	5.96E-01 tpy	1.19E-01 tpy	14,733 tpy
43	EPSS Generator 2	Diesel	2,937 hp	8,760 hr/yr	14,683 tpy	5.96E-01 tpy	1.19E-01 tpy	14,733 tpy
44	EPSS Generator 3	Diesel	2,937 hp	8,760 hr/yr	14,683 tpy	5.96E-01 tpy	1.19E-01 tpy	14,733 tpy
45	EPSS Generator 4	Diesel	2,937 hp	8,760 hr/yr	14,683 tpy	5.96E-01 tpy	1.19E-01 tpy	14,733 tpy
52	Boiler	Diesel	0.872 MMBtu/hr	8,760 hr/yr	623 tpy	2.53E-02 tpy	5.05E-03 tpy	625 tpy
							Significant Emission Units Total Potential to Emit - CO_2e	**2.10E+05 tpy**
Insignificant Emission Units								
	Various Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	2.3 MMBtu/hr, total	8,760 hr/yr	1,197 tpy	2.26E-02 tpy	2.26E-03 tpy	1,198 tpy
	Various Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	24.3 MMBtu/hr, total	8,760 hr/yr	12,435 tpy	2.34E-01 tpy	2.34E-02 tpy	12,448 tpy
66	Ace Tank Distillate Storage	Diesel	1,000 gal	8,760 hr/yr	0 tpy	0 tpy	0 tpy	0 tpy
67	201 Underground Storage Tank	Diesel	2,000 gal	8,760 hr/yr	0 tpy	0 tpy	0 tpy	0 tpy
69	EPSS Storage Tank 1	Diesel	45,000 gal	8,760 hr/yr	0 tpy	0 tpy	0 tpy	0 tpy
70	EPSS Storage Tank 2	Diesel	45,000 gal	8,760 hr/yr	0 tpy	0 tpy	0 tpy	0 tpy
							Insignificant Emission Units Total Potential to Emit - CO_2e	**1.36E+04 tpy**
							Total Potential to Emit - CO_2e	**2.24E+05 tpy**

Notes:
[1] Maximum annual operation for all units based on full-time operation to calculate unlimited potential emissions.
[2] Conversion factors:

Diesel Heating Value	137,000	Btu/gal
Natural Gas Heat Content:	1,000	Btu/scf
Turbine heat rate:	8,000	Btu/hp-hr
Diesel Density	6.90	lb/gal
Engine Heat Rate:	7,000	Btu/hp-hr

GHG Emission Factors (kg/MMBtu):	Fuel Gas	Diesel	GWP
CO_2	53.06	73.96	1
CH_4	1.00E-03	3.00E-03	25
N_2O	1.00E-04	6.00E-04	298

[3] Potential emissions for EU IDs 1-4 are highest when operating on diesel, therefore full time operation on diesel is assumed for the purpose of calculating unlimited potential emissions.

Table D-2.10. Potential to Emit (before controls/limitations) Tank Emissions - VOC Emissions
Providence Health System - Providence Alaska Medical Center

Parameter	Factor Reference	Emissions Unit ID			
		66	67	69	70
Orientation	NA	Horizontal	orizontal US	Vertical	Vertical
Contents	NA	Diesel	Diesel	Diesel	Diesel
Diameter (ft)	NA	6	12	15	15
Tank Height (ft), H_S	NA	5	5	40	40
Color	NA	White	White	White	White
Maximum Liquid Height (ft), H_L	NA	4	4	35	35
Capacity (gal)	NA	1,000	2,000	45,000	45,000
Throughput (gal/yr) [1,2]	NA	1,000	2,000	45,000	45,000
Turnovers [4]	NA	1	1	1	1
Paint Condition	NA	Average	Average	Average	Average
Standing Loss (L_S) Calculations [3]					
K_E	AP-42, Section 7.1, Equation 1-12	0.019	0.019	0.019	0.019
H_{VO} (ft)	AP-42, Section 7.1, Equation 1-16	1.06	1.13	5.16	5.16
H_{RO} (ft)	AP-42, Section 7.1, Equation 1-17	0.06	0.13	0.16	0.16
K_S	AP-42, Section 7.1, Equation 1-21	1.000	1.000	0.998	0.998
T_{AA} (^oR)	AP-42, Section 7.1, Equation 1-30	497.60	497.60	497.60	497.60
T_B (^oR)	AP-42, Section 7.1, Equation 1-31	498.23	498.23	498.23	498.23
T_V (^oR) - uninsulated	AP-42, Section 7.1, Equation 1-33	152.05	152.05	152.05	152.05
W_V (lb/ft^3)	AP-42, Section 7.1, Equation 1-22	4.78E-04	4.78E-04	4.78E-04	4.78E-04
L_S (lb/yr)	AP-42, Section 7.1, Equation 1-4	0.10	0	3.04	3.04
Working Loss (L_W) Calculations [3]					
Q (bbl/yr)	NA	24	48	1,071	1,071
V_Q (ft^3)	AP-42, Section 7.1, Equation 1-39	134	267	6,015	6,015
K_N [4]	AP-42, Section 7.1, Equation 1-35	1.00	1.00	1.00	1.00
L_W (lb/yr)	AP-42, Section 7.1, Equation 1-35	0.1	0.1	2.9	2.9
TOTAL VOCs L_T (tpy)	**AP-42, Section 7.1, Equation 1-1**	**8.21E-05**	**6.39E-05**	**0.003**	**0.003**

Note:

[1] Tanks are filled with submerged loading.

[2] EU ID 67 is conservatively estimated as an above ground storage tank.

[3] Meteorological Inputs (Anchorage, AK):

	T_{AX} =	42.5	^oF	502.2 ^oK
AP-42, Section 7.1, Table 7.1-6	T_{AN} =	33.3	^oF	493.0 ^oK
AP-42, Section 7.1, Table 7.1-7	α =	0.25	White, Average	
From the 1995 version of AP-42	I =	838	Btu/ft^2-d	
Constants:				
AP-42, Section 7.1, Table 7.1-2 (diesel/distilate)				
AP-42, Section 7.1, Table 7.1-2	M_V (diesel)=	130	lb/lb-mol	
AP-42, Section 7.1, Note below equation 1-37	P_{VA} (diesel)=	0.006	psi	
AP-42, Section 7.1, Note below equation 1-37	K_P (diesel)=	1		
	K_B =	1		

[4] K_N is equal to 1 for 36 or less turnovers per year

Table D-3.1. Expected Actual Annual Emissions (after controls/limitations) Summary
Providence Health System - Providence Alaska Medical Center

Emission Unit Type	Regulated Air Pollutant Emissions (tons per year) [1,2]							
	NO_X	CO	PM_{10}	$PM_{2.5}$ [3]	VOC	SO_2	HAP [4]	GHG (CO_2e) [5]
Significant	24.8	19.2	1.7	1.7	1.3	7.9	0.4	36,666
Insignificant	11.6	9.3	0.9	0.9	0.1	0.8	0.2	13,645
Total Expected Actual Emissions	**36.4**	**28.5**	**2.6**	**2.6**	**1.4**	**8.7**	**0.65**	**50,311**

Notes:

[1] Emissions are based on 2021 actual operations and emission factors recorded in source tests, where applicable.

[2] Regulated air pollutant calculations based on AP-42 emission factors, manufacturer data, and mass balances as shown in accompanying spreadsheets.

[3] PM_{10} emissions are assumed to equal $PM_{2.5}$ emissions.

[4] HAP emissions are a subset of either VOC emissions or PM_{10} emissions and are excluded from the total.

[5] GHG means greenhouse gases and is the summation of CO_2, CH_4, and N_2O and applying the global warming potential for each pollutant.

Table D-3.2. Expected Actual Annual Emissions (after controls/limitations) Calculations - Oxides of Nitrogen (NO_X) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	NO_X Emission Factor	Emission Unit Rating/Capacity	Expected Actual Operation [1]	Expected Actual NO_X Emissions [2]
Significant Emission Units							
1	SB-03 Steam Boiler	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	38.5 MMBtu/hr	65,847 Mscf/yr	3.3 tpy
		Diesel	Table 1.3-1, AP-42	20 lb/10^3 Gal		0 gal/yr	0 tpy
2	SB-04 Steam Boiler	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	38.5 MMBtu/hr	173,252 Mscf/yr	8.7 tpy
		Diesel	Table 1.3-1, AP-42	20 lb/10^3 Gal		1,311 gal/yr	0.01 tpy
3	SB-05 Steam Boiler	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	49.0 MMBtu/hr	56,869 Mscf/yr	2.8 tpy
		Diesel	Table 1.3-1, AP-42	20 lb/10^3 Gal		565 gal/yr	0.01 tpy
4	SB-06 Steam Boiler	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	42.2 MMBtu/hr	110,509 Mscf/yr	5.5 tpy
		Diesel	Table 1.3-1, AP-42	20 lb/10^3 Gal		736 gal/yr	0.01 tpy
17	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.031 lb/hp-hr	300 kW	13 hr/yr	0.1 tpy
22	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.031 lb/hp-hr	450 kW	14 hr/yr	0.1 tpy
28	MOB Hub Boiler 1	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	12.6 MMBtu/hr	17,491 Mscf/yr	0.9 tpy
29	MOB Hub Boiler 2	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	12.6 MMBtu/hr	25,892 Mscf/yr	1.3 tpy
30	Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.024 lb/hp-hr	680 hp	14 hr/yr	0.1 tpy
35	PRB Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.024 lb/hp-hr	1,046 hp	15 hr/yr	0.2 tpy
39	Tower S Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.024 lb/hp-hr	680 hp	14 hr/yr	0.1 tpy
42	EPSS Generator 1	Diesel	Vendor Data	41.9 lb/hr	2,937 hp	20 hr/yr	0.4 tpy
43	EPSS Generator 2	Diesel	Vendor Data	41.9 lb/hr	2,937 hp	20 hr/yr	0.4 tpy
44	EPSS Generator 3	Diesel	Vendor Data	41.9 lb/hr	2,937 hp	20 hr/yr	0.4 tpy
45	EPSS Generator 4	Diesel	Vendor Data	41.9 lb/hr	2,937 hp	20 hr/yr	0.4 tpy
46	EPSS Generator 5	Diesel	Vendor Data	41.9 lb/hr	2,937.0 hp	0 hr/yr	0 tpy
52	Boiler	Diesel	Table 1.3-1, AP-42	20.0 lb/kgal	0.872 MMBtu/hr	24 hr/yr	0.002 tpy
						Significant Emission Units Expected Actual Emissions - NO_X	**24.8 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-1, AP-42	94 lb/MMscf	2.3 MMBtu/hr	8,760 hr/yr [3]	1.0 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-1, AP-42	100 lb/MMscf	24.3 MMBtu/hr	8,760 hr/yr [3]	10.6 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gal	8,760 hr/yr [3]	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gal	8,760 hr/yr [3]	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gal	8,760 hr/yr [3]	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gal	8,760 hr/yr [3]	0 tpy
						Insignificant Emission Units Expected Actual Emissions - NO_X	**11.6 tpy**
						Total Expected Actual Emissions - NO_X	**36.4 tpy**

Notes:

[1] Actual emissions based on operation in calendar year 2021.

[2] Conversion factors:

Diesel Heating Value	137,000	Btu/gal
Natural Gas Heat Content:	1,000	Btu/scf
Engine Heat Rate:	7,000	Btu/hp-hr

[3] These units are not required to be monitored for hours of operation or throughput. Expected actual hours of operation are listed as the highest possible operation.

Table D-3.3. Expected Actual Annual Emissions (after controls/limitations) Calculations - Carbon Monoxide (CO) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	CO Emission Factor	Emission Unit Rating/Capacity	Expected Actual Operation [1]	Expected Actual CO Emissions [2]
Significant Emission Units							
1	SB-03 Steam Boiler	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	38.5 MMBtu/hr	65,847 Mscf/yr	2.8 tpy
		Diesel	Table 1.3-1, AP-42	5 lb/10^3 Gal		0 gal/yr	0 tpy
2	SB-04 Steam Boiler	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	38.5 MMBtu/hr	173,252 Mscf/yr	7.3 tpy
		Diesel	Table 1.3-1, AP-42	5 lb/10^3 Gal		1,311 gal/yr	0.003 tpy
3	SB-05 Steam Boiler	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	49.0 MMBtu/hr	56,869 Mscf/yr	2.4 tpy
		Diesel	Table 1.3-1, AP-42	5 lb/10^3 Gal		565 gal/yr	0.001 tpy
4	SB-06 Steam Boiler	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	42.2 MMBtu/hr	110,509 Mscf/yr	4.6 tpy
		Diesel	Table 1.3-1, AP-42	5 lb/10^3 Gal		736 gal/yr	0.002 tpy
17	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.00668 lb/hp-hr	300 kW	13 hr/yr	0.02 tpy
22	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.00668 lb/hp-hr	450 kW	14 hr/yr	0.03 tpy
28	MOB Hub Boiler 1	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	12.6 MMBtu/hr	17,491 Mscf/yr	0.7 tpy
29	MOB Hub Boiler 2	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	12.6 MMBtu/hr	25,892 Mscf/yr	1.1 tpy
30	Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.0055 lb/hp-hr	680 hp	14 hr/yr	0.03 tpy
35	PRB Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.0055 lb/hp-hr	1,046 hp	15 hr/yr	0.04 tpy
39	Tower S Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	0.0055 lb/hp-hr	680 hp	14 hr/yr	0.03 tpy
42	EPSS Generator 1	Diesel	Vendor Data	3.43 lb/hr	2,937 hp	20 hr/yr	0.03 tpy
43	EPSS Generator 2	Diesel	Vendor Data	3.43 lb/hr	2,937 hp	20 hr/yr	0.03 tpy
44	EPSS Generator 3	Diesel	Vendor Data	3.43 lb/hr	2,937 hp	20 hr/yr	0.03 tpy
45	EPSS Generator 4	Diesel	Vendor Data	3.43 lb/hr	2,937 hp	20 hr/yr	0.03 tpy
46	EPSS Generator 5	Diesel	Vendor Data	3.43 lb/hr	2,937 hp	0 hr/yr	0 tpy
52	Boiler	Diesel	Table 1.3-1, AP-42	5 lb/kgal	0.872 MMBtu/hr	24 hr/yr	3.82E-04 tpy
						Significant Emission Units Expected Actual Emissions - CO	**19.2 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-1, AP-42	40 lb/MMscf	2.3 MMBtu/hr	8,760 hr/yr [3]	0.4 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-1, AP-42	84 lb/MMscf	24.3 MMBtu/hr	8,760 hr/yr [3]	8.9 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gal	8,760 hr/yr [3]	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gal	8,760 hr/yr [3]	0 tpy
69	EPSS Storage Tank 1	Diesel	N/A	N A	45,000 gal	8,760 hr/yr [3]	0 tpy
70	EPSS Storage Tank 2	Diesel	N/A	N A	45,000 gal	8,760 hr/yr [3]	0 tpy
						Insignificant Emission Units Expected Actual Emissions - CO	**9.3 tpy**
						Total Expected Actual Emissions - CO	**28.5 tpy**

Notes:

[1] Actual emissions based on operation in calendar year 2021.

[2] Conversion factors:

Diesel Heating Value	137,000 Btu/gal
Natural Gas Heat Content:	1,000 Btu/scf
Engine Heat Rate:	7,000 Btu/hp-hr

[3] These units are not required to be monitored for hours of operation or throughput. Expected actual hours of operation are listed as the highest possible operation.

Table D-3.4. Expected Actual Annual Emissions (after controls/limitations) Calculations - Particulate Matter Less Than 10 Microns (PM10) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	PM_{10} Emission Factor	Emission Unit Rating/Capacity	Expected Actual Operation [1]	Expected Actual PM_{10} Emissions [2]
Significant Emission Units							
1	SB-03 Steam Boiler	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	38.5 MMBtu/hr	65,847 Mscf/yr	0.3 tpy
		Diesel	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/10^3 Gal		0 gal/yr	0 tpy
2	SB-04 Steam Boiler	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	38.5 MMBtu/hr	173,252 Mscf/yr	0.7 tpy
		Diesel	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/10^3 Gal		1,311 gal/yr	2.2E-03 tpy
3	SB-05 Steam Boiler	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	49.0 MMBtu/hr	56,869 Mscf/yr	0.2 tpy
		Diesel	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/10^3 Gal		565 gal/yr	9.32E-04 tpy
4	SB-06 Steam Boiler	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	42.2 MMBtu/hr	110,509 Mscf/yr	0.4 tpy
		Diesel	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/10^3 Gal		736 gal/yr	1.2E-03 tpy
17	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.0022 lb/hp-hr	300 kW	13 hr/yr	5.8E-03 tpy
22	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.0022 lb/hp-hr	450 kW	14 hr/yr	9.2E-03 tpy
28	MOB Hub Boiler 1	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	12.6 MMBtu/hr	17,491 Mscf/yr	0.1 tpy
29	MOB Hub Boiler 2	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	12.6 MMBtu/hr	25,892 Mscf/yr	0.1 tpy
30	Emergency Generator Engine	Diesel	Table 3.4-2, AP-42	0.0573 lb/MMBtu	680 hp	14 hr/yr	1.8E-03 tpy
35	PRB Emergency Generator Engine	Diesel	Table 3.4-2, AP-42	0.0573 lb/MMBtu	1,046 hp	15 hr/yr	3.1E-03 tpy
39	Tower S Emergency Generator Engine	Diesel	Table 3.4-2, AP-42	0.0573 lb/MMBtu	680 hp	14 hr/yr	1.9E-03 tpy
42	EPSS Generator 1	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	20 hr/yr	2.3E-03 tpy
43	EPSS Generator 2	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	20 hr/yr	2.3E-03 tpy
44	EPSS Generator 3	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	20 hr/yr	2.3E-03 tpy
45	EPSS Generator 4	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	20 hr/yr	2.3E-03 tpy
46	EPSS Generator 5	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	0 hr/yr	0 tpy
52	Boiler	Diesel	Table 1.3-1 and 1.3-2, AP-42	3.30 lb/kgal	0.872 MMBtu/hr	24 hr/yr	2.52E-04 tpy
						Significant Emission Units Expected Actual Emissions - PM_{10}	**1.7 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	2.3 MMBtu/hr	8,760 hr/yr [3]	0.08 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	7.6 lb/MMscf	24.3 MMBtu/hr	8,760 hr/yr [3]	0.8 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gal	8,760 hr/yr [3]	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gal	8,760 hr/yr [3]	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gal	8,760 hr/yr [3]	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gal	8,760 hr/yr [3]	0 tpy
						Insignificant Emission Units Expected Actual Emissions - PM_{10}	**0.9 tpy**
						Total Expected Actual Emissions - PM_{10}	**2.6 tpy**

Notes:

[1] Actual emissions based on operation in calendar year 2021.

[2] Conversion factors:

Diesel Heating Value	137,000	Btu/gal
Natural Gas Heat Content:	1,000	Btu/scf
Engine Heat Rate:	7,000	Btu/hp-hr

[3] These units are not required to be monitored for hours of operation or throughput. Expected actual hours of operation are listed as the highest possible operation.

Table D-3.5. Expected Actual Annual Emissions (after controls/limitations) Calculations - Volatile Organic Compounds (VOC) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	VOC Emission Factor	Emission Unit Rating/Capacity	Expected Actual Operation [1]	Expected Actual VOC Emissions [2]
Significant Emission Units							
1	SB-03 Steam Boiler	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	38.5 MMBtu/hr	65,847 Mscf/yr	0.2 tpy
		Diesel	Table 1.3-1, AP-42	0.2 lb/10^3 Gal		0 gal/yr	0 tpy
2	SB-04 Steam Boiler	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	38.5 MMBtu/hr	173,252 Mscf/yr	0.5 tpy
		Diesel	Table 1.3-1, AP-42	0.2 lb/10^3 Gal		1,311 gal/yr	1.3E-04 tpy
3	SB-05 Steam Boiler	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	49.0 MMBtu/hr	56,869 Mscf/yr	0.2 tpy
		Diesel	Table 1.3-1, AP-42	0.2 lb/10^3 Gal		565 gal/yr	5.65E-05 tpy
4	SB-06 Steam Boiler	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	42.2 MMBtu/hr	110,509 Mscf/yr	0.3 tpy
		Diesel	Table 1.3-1, AP-42	0.2 lb/10^3 Gal		736 gal/yr	7.4E-05 tpy
17	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.00247 lb/hp-hr	300 kW	13 hr/yr	6.5E-03 tpy
22	Emergency Generator Engine	Diesel	Table 3.3-1, AP-42	0.00247 lb/hp-hr	450 kW	14 hr/yr	1.0E-02 tpy
28	MOB Hub Boiler 1	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	12.6 MMBtu/hr	17,491 Mscf/yr	0.05 tpy
29	MOB Hub Boiler 2	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	12.6 MMBtu/hr	25,892 Mscf/yr	0.07 tpy
30	Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	7.05E-04 lb/hp-hr	680 hp	14 hr/yr	3.2E-03 tpy
35	PRB Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	7.05E-04 lb/hp-hr	1,046 hp	15 hr/yr	5.5E-03 tpy
39	Tower S Emergency Generator Engine	Diesel	Table 3.4-1, AP-42	7.05E-04 lb/hp-hr	680 hp	14 hr/yr	3.3E-03 tpy
42	EPSS Generator 1	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	20 hr/yr	2.3E-03 tpy
43	EPSS Generator 2	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	20 hr/yr	2.3E-03 tpy
44	EPSS Generator 3	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	20 hr/yr	2.3E-03 tpy
45	EPSS Generator 4	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	20 hr/yr	2.3E-03 tpy
46	EPSS Generator 5	Diesel	Vendor Data	0.23 lb/hr	2,937 hp	0 hr/yr	0 tpy
52	Boiler	Diesel	Table 1.3-1, AP-42	0.2 lb/kgal	0.872 MMBtu/hr	24 hr/yr	1.5E-05 tpy
						Significant Emission Units Expected Actual Emissions - VOC	**1.3 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	2.3 MMBtu/hr	8,760 hr/yr [3]	0.06 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	5.5 lb/MMscf	24.3 MMBtu/hr	8,760 hr/yr [3]	0.08 tpy
66	Ace Tank Distillate Storage	Diesel	See Table D-3.10	NA	1,000 gal	8,760 hr/yr [3]	8.2E-05 tpy
67	201 Underground Storage Tank	Diesel	See Table D-3.10	NA	2,000 gal	8,760 hr/yr [3]	6.4E-05 tpy
69	EPSS Storage Tank 1	Diesel	See Table D-3.10	NA	45,000 gal	8,760 hr/yr [3]	3.0E-03 tpy
70	EPSS Storage Tank 2	Diesel	See Table D-3.10	NA	45,000 gal	8,760 hr/yr [3]	3.0E-03 tpy
						Insignificant Emission Units Expected Actual Emissions - VOC	**0.1 tpy**
						Total Expected Actual Emissions - VOC	**1.4 tpy**

Notes:

[1] Actual emissions based on operation in calendar year 2021.

[2] Conversion factors:

Diesel Heating Value	137,000	Btu/gal
Natural Gas Heat Content:	1,000	Btu/scf
Engine Heat Rate:	7,000	Btu/hp-hr

[3] These units are not required to be monitored for hours of operation or throughput. Expected actual hours of operation are listed as the highest possible operation and significant tanks assume one turnover a year.

Table D-3.6. Expected Actual Annual Emissions (after controls/limitations) Calculations - Sulfur Dioxide (SO_2) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	SO_2 Emission Factor	Emission Unit Rating/Capacity	Expected Actual Operation [1]	Expected Actual SO_2 Emissions [2]
Significant Emission Units							
1	SB-03 Steam Boiler	Natural Gas	Permit Limit	12 gr S/100 scf	38.5 MMBtu/hr	65,847 Mscf/yr	1.1 tpy
		Diesel	Permit Limit	0.5 pct. wt. S		0 gal/yr	0 tpy
2	SB-04 Steam Boiler	Natural Gas	Permit Limit	12 gr S/100 scf	38.5 MMBtu/hr	173,252 Mscf/yr	3.0 tpy
		Diesel	Permit Limit	0.5 pct. wt. S		1,311 gal/yr	0.05 tpy
3	SB-05 Steam Boiler	Natural Gas	Permit Limit	12 gr S/100 scf	49.0 MMBtu/hr	56,869 Mscf/yr	1.0 tpy
		Diesel	Permit Limit	0.5 pct. wt. S		565 gal/yr	0.02 tpy
4	SB-06 Steam Boiler	Natural Gas	Permit Limit	12 gr S/100 scf	42.2 MMBtu/hr	110,509 Mscf/yr	1.9 tpy
		Diesel	Permit Limit	0.5 pct. wt. S		736 gal/yr	0.03 tpy
17	Emergency Generator Engine	Diesel	Permit Limit	0.5 pct. wt. S	300 kW	13 hr/yr	0.009 tpy
22	Emergency Generator Engine	Diesel	Permit Limit	0.5 pct. wt. S	450 kW	14 hr/yr	0.01 tpy
28	MOB Hub Boiler 1	Natural Gas	Permit Limit	12 gr S/100 scf	12.6 MMBtu/hr	17,491 Mscf/yr	0.3 tpy
29	MOB Hub Boiler 2	Natural Gas	Permit Limit	12 gr S/100 scf	12.6 MMBtu/hr	25,892 Mscf/yr	0.4 tpy
30	Emergency Generator Engine	Diesel	Permit Limit	0.5 pct. wt. S	680 hp	14 hr/yr	0.02 tpy
35	PRB Emergency Generator Engine	Diesel	Permit Limit	0.5 pct. wt. S	1,046 hp	15 hr/yr	0.03 tpy
39	Tower S Emergency Generator Engine	Diesel	Permit Limit	0.05 pct. wt. S	680 hp	14 hr/yr	0.00 tpy
42	EPSS Generator 1	Diesel	Permit Limit	15 ppmw	2,937 hp	20 hr/yr	3.1E-04 tpy
43	EPSS Generator 2	Diesel	Permit Limit	15 ppmw	2,937 hp	20 hr/yr	3.1E-04 tpy
44	EPSS Generator 3	Diesel	Permit Limit	15 ppmw	2,937 hp	20 hr/yr	3.1E-04 tpy
45	EPSS Generator 4	Diesel	Permit Limit	15 ppmw	2,937 hp	20 hr/yr	3.1E-04 tpy
46	EPSS Generator 5	Diesel	Permit Limit	15 ppmw	2,937 hp	0 hr/yr	0 tpy
52	Boiler	Diesel	Permit Limit	0.5 pct. wt. S	0.872 MMBtu/hr	24 hr/yr	0.01 tpy
						Significant Emission Units Expected Actual Emissions - SO_2	**7.88 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	12 gr/100 scf	2.3 MMBtu/hr	8,760 hr/yr [3]	0.4 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	Table 1.4-2, AP-42	12 gr/100 scf	24.3 MMBtu/hr	8,760 hr/yr [3]	0.5 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gal	8,760 hr/yr [3]	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gal	8,760 hr/yr [3]	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gal	8,760 hr/yr [3]	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gal	8,760 hr/yr [3]	0 tpy
						Insignificant Emission Units Expected Actual Emissions - SO_2	**0.8 tpy**
						Total Expected Actual Emissions - SO_2	**8.7 tpy**

Notes:

[1] Actual emissions based on operation in calendar year 2021.

[2] Conversion factors:

Diesel Heating Value	137,000	Btu/gal
Natural Gas Heat Content:	1,000	Btu/scf
Turbine Heat Rate:	8,000	Btu/hp-hr
Diesel Density	6.90	lb/gal
Standard Molar Volume	385.3	scf/lb-mol
Engine Heat Rate:	7,000	Btu/hp-hr

[3] These units are not required to be monitored for hours of operation or throughput. Expected actual hours of operation are listed as the highest possible operation.

Table D-3.7. Expected Actual Annual Emissions (after controls/limitations) Calculations - Hazardous Air Pollutants (HAP) Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Factor Reference	HAP Emission Factor	Emission Unit Rating/Capacity	Expected Actual Operation [1]	Expected Actual HAP Emissions [2]
Significant Emission Units							
1	SB-03 Steam Boiler	Natural Gas	See Table D-1.11	1.89 lb/MMscf	38.5 MMBtu/hr	65,847 Mscf/yr	0.06 tpy
		Diesel	See Table D-1.11	1.58E-01 lb/10^3 Gal		0 gal/yr	0 tpy
2	SB-04 Steam Boiler	Natural Gas	See Table D-1.11	1.89 lb/MMscf	38.5 MMBtu/hr	173,252 Mscf/yr	0.2 tpy
		Diesel	See Table D-1.11	1.58E-01 lb/10^3 Gal		1,311 gal/yr	1.03E-04 tpy
3	SB-05 Steam Boiler	Natural Gas	See Table D-1.11	1.89 lb/MMscf	49.0 MMBtu/hr	56,869 Mscf/yr	0.05 tpy
		Diesel	See Table D-1.11	1.58E-01 lb/10^3 Gal		565 gal/yr	4.45E-05 tpy
4	SB-06 Steam Boiler	Natural Gas	See Table D-1.11	1.89 lb/MMscf	42.2 MMBtu/hr	110,509 Mscf/yr	0.1 tpy
		Diesel	See Table D-1.11	1.58E-01 lb/10^3 Gal		736 gal/yr	5.80E-05 tpy
17	Emergency Generator Engine	Diesel	See Table D-1.11	3.87E-03 lb/MMBtu	300 kW	13 hr/yr	7.15E-05 tpy
22	Emergency Generator Engine	Diesel	See Table D-1.11	3.87E-03 lb/MMBtu	450 kW	14 hr/yr	1.14E-04 tpy
28	MOB Hub Boiler 1	Natural Gas	See Table D-1.11	1.89 lb/MMscf	12.6 MMBtu/hr	17,491 Mscf/yr	0.02 tpy
29	MOB Hub Boiler 2	Natural Gas	See Table D-1.11	1.89 lb/MMscf	12.6 MMBtu/hr	25,892 Mscf/yr	0.02 tpy
30	Emergency Generator Engine	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	680 hp	14 hr/yr	5.02E-05 tpy
35	PRB Emergency Generator Engine	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	1,046 hp	15 hr/yr	8.52E-05 tpy
39	Tower S Emergency Generator Engine	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	680 hp	14 hr/yr	5.09E-05 tpy
42	EPSS Generator 1	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	2,937 hp	20 hr/yr	3.18E-04 tpy
43	EPSS Generator 2	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	2,937 hp	20 hr/yr	3.18E-04 tpy
44	EPSS Generator 3	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	2,937 hp	20 hr/yr	3.18E-04 tpy
45	EPSS Generator 4	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	2,937 hp	20 hr/yr	3.18E-04 tpy
46	EPSS Generator 5	Diesel	See Table D-1.11	1.56E-03 lb/MMBtu	2,937 hp	0 hr/yr	0 tpy
52	Boiler	Diesel	See Table D-1.11	1.58E-01 lb/10^3Gal	0.872 MMBtu/hr	24 hr/yr	1.20E-05 tpy
						Significant Emission Units Total Potential to Emit with Limits - HAP	**0.4 tpy**
Insignificant Emission Units							
N/A	Various Combined Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	See Table D-1.11	1.89 lb/MMscf	2.3 MMBtu/hr	8,760 hr/yr [3]	0.02 tpy
N/A	Various Combined Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	See Table D-1.11	1.89 lb/MMscf	24.3 MMBtu/hr	8,760 hr/yr [3]	0.20 tpy
66	Ace Tank Distillate Storage	Diesel	NA	N A	1,000 gal	8,760 hr/yr [3]	0 tpy
67	201 Underground Storage Tank	Diesel	NA	N A	2,000 gal	8,760 hr/yr [3]	0 tpy
69	EPSS Storage Tank 1	Diesel	NA	N A	45,000 gal	8,760 hr/yr [3]	0 tpy
70	EPSS Storage Tank 2	Diesel	NA	N A	45,000 gal	8,760 hr/yr [3]	0 tpy
						Insignificant Emission Units Total Potential to Emit with Limits - HAP	**0.2 tpy**
						Total Potential to Emit with Limits - HAP	**0.6 tpy**

Notes:
[1] Maximum annual operation for all units based on full-time operation, or permit operating limits, where applicable.
[2] Conversion factors:

Diesel Heating Value	137,000	Btu/gal
Natural Gas Heat Content:	1,000	Btu/scf
Turbine Heat Rate:	8000	Btu/hp-hr
Diesel Density	6.90	lb/gal
Engine Heat Rate:	7,000	Btu/hp-hr

[3] These units are not required to be monitored for hours of operation or throughput. Expected actual hours of operation are listed as the highest possible operation.

Table D-3.8. Expected Actual Annual Emissions (after controls/limitations) - Hazardous Air Pollutants (HAP) Emission Factors
Providence Health System - Providence Alaska Medical Center

Pollutant	Diesel Boilers AP-42 Tables 1.3-8, 9, & 11	Small Diesel Engines AP-42 Table 3.3-2	Large Diesel Engines AP-42 Tables 3.4-3, 4	Natural Gas Boilers/Heaters AP-42 Tables 1.4-2, 3, & 4
Acenaphthene	2.11E-05 lb/10^3 Gal	1.42E-06 lb/MMBtu	4.68E-06 lb/MMBtu	1.80E-06 lb/MMscf
Acenaphthylene	2.53E-07 lb/10^3 Gal	5.06E-06 lb/MMBtu	9.23E-06 lb/MMBtu	1.80E-06 lb/MMscf
Acetaldehyde	N A	7.67E-04 lb/MMBtu	2.52E-05 lb/MMBtu	N A
Acrolein	N A	9.25E-05 lb/MMBtu	7.88E-06 lb/MMBtu	N A
Anthracene	1.22E-06 lb/10^3 Gal	1.87E-06 lb/MMBtu	1.23E-06 lb/MMBtu	2.40E-06 lb/MMscf
Antimony	5.25E-03 lb/10^3 Gal	N A	N A	N A
Arsenic	1.32E-03 lb/10^3 Gal	N A	N A	2.00E-04 lb/MMscf
Benz(a)anthracene	4.01E-06 lb/10^3 Gal	1.68E-06 lb/MMBtu	6.22E-07 lb/MMBtu	1.80E-06 lb/MMscf
Benzene	2.14E-04 lb/10^3 Gal	9.33E-04 lb/MMBtu	7.76E-04 lb/MMBtu	2.10E-03 lb/MMscf
Benzo(a)pyrene	N A	1.88E-07 lb/MMBtu	2.57E-07 lb/MMBtu	1.20E-06 lb/MMscf
Benzo(b)fluoranthene	1.48E-06 lb/10^3 Gal	9.91E-08 lb/MMBtu	1.11E-06 lb/MMBtu	1.80E-06 lb/MMscf
Benzo(g,h,i)peylene	2.26E-06 lb/10^3 Gal	4.89E-07 lb/MMBtu	5.56E-07 lb/MMBtu	1.20E-06 lb/MMscf
Benzo(k)fluoranthene	N A	1.55E-07 lb/MMBtu	2.18E-07 lb/MMBtu	1.80E-06 lb/MMscf
Beryllium	2.78E-05 lb/10^3 Gal	N A	N A	1.20E-05 lb/MMscf
1,3-Butadiene	N A	3.91E-05 lb/MMBtu	N A	N A
Cadmium	3.98E-04 lb/10^3 Gal	N A	N A	1.10E-03 lb/MMscf
Chromium	8.45E-04 lb/10^3 Gal	N A	N A	1.40E-03 lb/MMscf
Chromium VI	2.48E-04 lb/10^3 Gal	N A	N A	N A
Chrysene	2.38E-06 lb/10^3 Gal	3.53E-07 lb/MMBtu	1.53E-06 lb/MMBtu	1.80E-06 lb/MMscf
Cobalt	6.02E-03 lb/10^3 Gal	N A	N A	8.40E-05 lb/MMscf
Dibenzo(a,h)anthracene	1.37E-06 lb/10^3 Gal	5.83E-07 lb/MMBtu	3.46E-07 lb/MMBtu	1.20E-06 lb/MMscf
1,1,1-Trichloroethane	2.36E-04 lb/10^3 Gal	N A	N A	N A
Ethylbenzene	6.36E-05 lb/10^3 Gal	N A	N A	N A
Fluoranthene	4.84E-06 lb/10^3 Gal	7.61E-06 lb/MMBtu	4.03E-06 lb/MMBtu	3.00E-06 lb/MMscf
Fluorene	4.47E-06 lb/10^3 Gal	2.92E-05 lb/MMBtu	1.28E-06 lb/MMBtu	2.80E-06 lb/MMscf
Formaldehyde	3.30E-02 lb/10^3 Gal	1.18E-03 lb/MMBtu	7.89E-05 lb/MMBtu	7.50E-02 lb/MMscf
Hexane	N A	N A	N A	1.80E+00 lb/MMscf
Indeno(1,2,3-cd)pyrene	2.14E-06 lb/10^3 Gal	3.75E-07 lb/MMBtu	4.14E-07 lb/MMBtu	1.80E-06 lb/MMscf
Lead	1.51E-03 lb/103 Gal	N A	N A	5.00E-04 lb/MMscf
Manganese	3.00E-03 lb/103 Gal	N A	N A	3.80E-04 lb/MMscf
Mercury	1.13E-04 lb/103 Gal	N A	N A	N A
Naphthalene	1.13E-03 lb/10^3 Gal	8.48E-05 lb/MMBtu	1.30E-04 lb/MMBtu	6.10E-04 lb/MMscf
Nickel	8.45E-02 lb/10^3 Gal	N A	N A	2.10E-03 lb/MMscf
Phenanathrene	1.05E-05 lb/10^3 Gal	2.94E-05 lb/MMBtu	4.08E-05 lb/MMBtu	1.70E-05 lb/MMscf
Phosphorous	9.46E-03 lb/10^3 Gal	N A	N A	N A
PAH	N A	N A	N A	N A
Polycylic Organic Matter	3.30E-03 lb/10^3 Gal	N A	N A	N A
Propylene Oxide	N A	N A	N A	N A
Pyrene	4.25E-06 lb/10^3 Gal	4.78E-06 lb/MMBtu	3.71E-06 lb/MMBtu	5.00E-06 lb/MMscf
Selenium	6.83E-04 lb/10^3 Gal	N A	N A	2.40E-05 lb/MMscf
Toluene	6.20E-03 lb/10^3 Gal	4.09E-04 lb/MMBtu	2.81E-04 lb/MMBtu	3.40E-03 lb/MMscf
Xylenes	1.09E-04 lb/10^3 Gal	2.85E-04 lb/MMBtu	1.93E-04 lb/MMBtu	N A
Total HAPs	**1.58E-01 lb/10^3 Gal**	**3.87E-03 lb/MMBtu**	**1.56E-03 lb/MMBtu**	**1.89 lb/MMscf**

Table D-3.9. Expected Actual Annual Emissions (after controls/limitations) Greenhouse Gas Calculations - CO_2e Emissions
Providence Health System - Providence Alaska Medical Center

Emission Unit ID	Emission Unit Description	Fuel Type	Emission Unit Rating/Capacity	Expected Actual Operation [1]	CO_2 Emissions [2]	CH_4 Emissions [2]	N_2O Emissions [2]	CO_2e Emissions
Significant Emission Units								
1	SB-03 Steam Boiler	Natural Gas	38.5 MMBtu/hr	65,847 Mscf/yr	3,851 tpy	7.26E-02 tpy	7.26E-03 tpy	3,855 tpy
		Diesel		0 gal/yr	0 tpy	0 tpy	0 tpy	0 tpy
2	SB-04 Steam Boiler	Natural Gas	38.5 MMBtu/hr	173,252 Mscf/yr	10,133 tpy	1.91E-01 tpy	1.91E-02 tpy	10,144 tpy
		Diesel		1,311 gal/yr	15 tpy	5.94E-04 tpy	1.19E-04 tpy	15 tpy
3	SB-05 Steam Boiler	Natural Gas	49.0 MMBtu/hr	56,869 Mscf/yr	3,326 tpy	6.27E-02 tpy	6.27E-03 tpy	3,330 tpy
		Diesel		565 gal/yr	6 tpy	2.56E-04 tpy	5.12E-05 tpy	6 tpy
4	SB-06 Steam Boiler	Natural Gas	42.2 MMBtu/hr	110509 Mscf/yr	6,463 tpy	1.22E-01 tpy	1.22E-02 tpy	6,470 tpy
		Diesel		736 gal/yr	8 tpy	3.33E-04 tpy	6.67E-05 tpy	8 tpy
17	Emergency Generator Engine	Diesel	300.0 kW	17,491 Mscf/yr	1,023 tpy	1.93E-02 tpy	1.93E-03 tpy	1,024 tpy
22	Emergency Generator Engine	Diesel	450.0 kW	25,892 Mscf/yr	1,514 tpy	2.85E-02 tpy	2.85E-03 tpy	1,516 tpy
28	MOB Hub Boiler 1	Natural Gas	12.6 MMBtu/hr	65,847 Mscf/yr	3,851 tpy	7.26E-02 tpy	7.26E-03 tpy	3,855 tpy
29	MOB Hub Boiler 2	Natural Gas	12.6 MMBtu/hr	173,252 Mscf/yr	10,133 tpy	1.91E-01 tpy	1.91E-02 tpy	10,144 tpy
30	Emergency Generator Engine	Diesel	680 hp	14 hr/yr	5 tpy	2.13E-04 tpy	4.25E-05 tpy	5 tpy
35	PRB Emergency Generator Engine	Diesel	1,046 hp	15 hr/yr	9 tpy	3.61E-04 tpy	7.22E-05 tpy	9 tpy
39	Tower S Emergency Generator Engine	Diesel	680 hp	14 hr/yr	5 tpy	2.16E-04 tpy	4.31E-05 tpy	5 tpy
42	EPSS Generator 1	Diesel	2,937 hp	20 hr/yr	33 tpy	1.35E-03 tpy	2.69E-04 tpy	33 tpy
43	EPSS Generator 2	Diesel	2,937 hp	20 hr/yr	33 tpy	1.35E-03 tpy	2.69E-04 tpy	33 tpy
44	EPSS Generator 3	Diesel	2,937 hp	20 hr/yr	33 tpy	1.35E-03 tpy	2.69E-04 tpy	33 tpy
45	EPSS Generator 4	Diesel	2,937 hp	20 hr/yr	33 tpy	1.35E-03 tpy	2.69E-04 tpy	33 tpy
46	EPSS Generator 5	Diesel	2,937 hp	0 hr/yr	0 tpy	0 tpy	0 tpy	0 tpy
52	Boiler	Diesel	0.872 MMBtu/hr	24 hr/yr	2 tpy	6.92E-05 tpy	1.38E-05 tpy	2 tpy
					Significant Emission Units Total Expected Actual Emissions - CO_2e			**36,666 tpy**
Insignificant Emission Units								
	Various Natural Gas-Fired Boilers and Heaters <0.3 MMBtu/hr	Natural Gas	2.3 MMBtu/hr	8,760 hr/yr [3]	1.20E+03 tpy	2.25E-02 tpy	2.25E-03 tpy	1.20E+03 tpy
	Various Natural Gas-Fired Boilers and Heaters >0.3 MMBtu/hr, <100 MMBtu/hr	Natural Gas	24.3 MMBtu/hr	8,760 hr/yr [3]	1.24E+04 tpy	2.34E-01 tpy	2.34E-02 tpy	1.24E+04 tpy
66	Ace Tank Distillate Storage	Diesel	1,000 gal	8,760 hr/yr [3]	0 tpy	0 tpy	0 tpy	0 tpy
67	201 Underground Storage Tank	Diesel	2,000 gal	8,760 hr/yr [3]	0 tpy	0 tpy	0 tpy	0 tpy
69	EPSS Storage Tank 1	Diesel	45,000 gal	8,760 hr/yr [3]	0 tpy	0 tpy	0 tpy	0 tpy
70	EPSS Storage Tank 2	Diesel	45,000 gal	8,760 hr/yr [3]	0 tpy	0 tpy	0 tpy	0 tpy
					Insignificant Emission Units Total Expected Actual Emissions - CO_2e			**1.36E+04 tpy**
					Total Expected Actual Emissions - CO_2e			**5.03E+04 tpy**

Notes:
[1] Expected actual operation is based on actual 2021 data, except for EU IDs 27, 52, 69, 70, and the insignificant units which are not required to be tracked and are therefore estimated with the maximum hours of operation.
[2] Conversion factors:

Diesel Heating Value	137,000	Btu/gal
Natural Gas Heat Content:	1,000	Btu/scf
Turbine heat rate:	8,000	Btu/hp-hr
Diesel Density	6.90	lb/gal
Engine Heat Rate:	7,000	Btu/hp-hr

GHG Emission Factors (kg/MMBtu):	Fuel Gas	Diesel	GWP
CO_2	53.06	73.96	1
CH_4	1.00E-03	3.00E-03	25
N_2O	1.00E-04	6.00E-04	298

Table D-3.10. Expected Actual Annual Emissions (after controls/limitations) Tank Emissions - VOC Emissions
Providence Health System - Providence Alaska Medical Center

Parameter	Factor Reference	Emissions Unit ID			
		66	67	69	70
Orientation	NA	Horizontal	orizontal US	Vertical	Vertical
Contents	NA	Diesel	Diesel	Diesel	Diesel
Diameter (ft)	NA	6	12	15	15
Tank Height (ft), H_S	NA	5	5	40	40
Color	NA	White	White	White	White
Maximum Liquid Height (ft), H_L	NA	4	4	35	35
Capacity (gal)	NA	1,000	2,000	45,000	45,000
Throughput (gal/yr) [1,2]	NA	1,000	2,000	45,000	45,000
Turnovers [4]	NA	1	1	1	1
Paint Condition	NA	Average	Average	Average	Average
Standing Loss (L_S) Calculations [3]					
K_E	AP-42, Section 7.1, Equation 1-12	0.019	0.019	0.019	0.019
H_{VO} (ft)	AP-42, Section 7.1, Equation 1-16	1.06	1.13	5.16	5.16
H_{RO} (ft)	AP-42, Section 7.1, Equation 1-17	0.06	0.13	0.16	0.16
K_S	AP-42, Section 7.1, Equation 1-21	1.000	1.000	0.998	0.998
T_{AA} (^oR)	AP-42, Section 7.1, Equation 1-30	497.60	497.60	497.60	497.60
T_B (^oR)	AP-42, Section 7.1, Equation 1-31	498.23	498.23	498.23	498.23
T_V (^oR) - uninsulated	AP-42, Section 7.1, Equation 1-33	152.05	152.05	152.05	152.05
W_V (lb/ft^3)	AP-42, Section 7.1, Equation 1-22	4.78E-04	4.78E-04	4.78E-04	4.78E-04
L_S (lb/yr)	AP-42, Section 7.1, Equation 1-4	0.10	0	3.04	3.04
Working Loss (L_W) Calculations [3]					
Q (bbl/yr)	NA	24	48	1,071	1,071
V_Q (ft^3)	AP-42, Section 7.1, Equation 1-39	134	267	6,015	6,015
K_N [4]	AP-42, Section 7.1, Equation 1-35	1.00	1.00	1.00	1.00
L_W (lb/yr)	AP-42, Section 7.1, Equation 1-35	0.1	0.1	2.9	2.9
TOTAL VOCs L_T (tpy)	**AP-42, Section 7.1, Equation 1-1**	**8.21E-05**	**6.39E-05**	**0.003**	**0.003**

Note:

[1] Tanks are filled with submerged loading.

[2] EU ID 67 is conservatively estimated as an above ground storage tank.

[3] Meteorological Inputs (Anchorage, AK):

	T_{AX} =	42.5	^oF	502.2 ^oK
AP-42, Section 7.1, Table 7.1-6	T_{AN} =	33.3	^oF	493.0 ^oK
AP-42, Section 7.1, Table 7.1-7	α =	0.25	White, Average	
From the 1995 version of AP-42	I =	838	Btu/ft^2-d	

Constants:

AP-42, Section 7.1, Table 7.1-2 (diesel/distilate)

AP-42, Section 7.1, Table 7.1-2	M_V (diesel)=	130	lb/lb-mol
AP-42, Section 7.1, Note below equation 1-37	P_{VA} (diesel)=	0.006	psi
AP-42, Section 7.1, Note below equation 1-37	K_P (diesel)=	1	
	K_B =	1	

[4] K_N is equal to 1 for 36 or less turnovers per year

Appendix E Regulatory Requirements

Application for Renewal of an Air Quality Operating Permit

Providence Alaska Medical Center

Providence Health System – Washington Inc.

SLR Project No.: 105.00541.23001

January 8, 2024

E.1 Form E1: Stationary Source-Wide Applicable Requirements

E.2 Form E2: Permit-to-Operate and Minor Permit Condition Change Request

E.3 Form E3: Title V Condition Change Request

FORM E1

Stationary Source-Wide Applicable Requirements

Permit Number: AQ0486TVP03

Stationary Source-Wide Applicable Requirements (*attach additional sheets as needed*):

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0486TVP03 – Condition 17.1	Minor Permit No. AQ0486MSS01, Condition 9	Sulfur Limits	Limit the fuel sulfur content of the distillate fuel oil burned in the stationary source to no greater than 0.5 percent by weight by burning only No. 1 or No. 2 grade distillate oil.	Yes	See Condition 17.3, 17.5, and 17.6.
AQ0486TVP03 – Condition 17.2	Minor Permit No. AQ0486MSS01, Condition 9	Sulfur Limits	Burn pipeline quality natural gas in the gas fired units with a total sulfur content not to exceed 12 grains per 100 standard cubic feet of gas.	Yes	See Condition 17.4 through 17.6.
AQ0486TVP03 – Condition 21.1	18 AAC 50.055(a)(1)	Visible Emissions	For insignificant sources, do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	See Condition 21.4 and Standard Permit Condition V.
AQ0486TVP03 – Condition 21.2	18 AAC 50.055(b)(1)	Particulate Matter	For insignificant sources, do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	See Condition 21.4 and Standard Permit Condition V.
AQ0486TVP03 – Condition 21.3	18 AAC 50.055(c)	Sulfur	For insignificant sources, do not cause or allow sulfur compound emissions to exceed 500 ppm averaged over three hours.	Yes	See Condition 21.4 and Standard Permit Condition V.

FORM E1

Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0486TVP03 – Condition 22	40 CFR 60.7(a) & 60.15(d), Subpart A	NSPS Subpart A Notification	For any affected facility or existing facility 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:	Yes	See Condition 22.1 through 22.5.
AQ0486TVP03 – Condition 30	40 CFR 61, Subparts A & M, and Appendix A	Asbestos NESHAP	Comply with the 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.	Yes	Annual Compliance Audit.
AQ0486TVP03 – Condition 34	40 CFR 82, Subpart F	Refrigerant Recycling and Disposal	Comply with the applicable standards for recycling and emission reduction of refrigerants in 40 CFR 82 Subpart F.	Yes	Annual Compliance Audit.
AQ0486TVP03 – Condition 35	40 CFR 82, Subpart G	Significant New Alternatives.	Comply with the applicable prohibitions in 40 CFR 82.174.	Yes	Annual Compliance Audit.
AQ0486TVP03 – Condition 36	40 CFR 82, Subpart H	Halons Emissions Reduction	Comply with the applicable prohibitions in 40 CFR 82.270.	Yes	Annual Compliance Audit.
AQ0486TVP03 – Conditions 37 through 39	40 CFR 63.1(b), 63.5(b)(4), 63.6(c)(1), 63.10(b)(3)	NESHAPs 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).	Yes	Annual Compliance Audit.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0486TVP03 – Conditions 40 and 41	18 AAC 50.326(j)(4), 50.040(j), & 40 CFR 60.13, 63.10(d),(f), & 71.6(c)(6)	NSPS and NESHAP Reports	**Reports.** Attach to the operating report required by Condition 81 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; and **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.	Yes.	Annual Compliance Audit.
AQ0486TVP03 – Condition 42	18 AAC 50.326(j)(3) 50.345(a) & (e)	Standard Terms and Conditions	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.	Yes.	Annual Compliance Audit.
AQ0486TVP03 – Condition 43	18 AAC 50.326(j)(3) 50.345(a) & (f)	Standard Terms and Conditions	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.	Yes.	Annual Compliance Audit.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0486TVP03 – Condition 44	18 AAC 50.326(j)(3) 50.345(a) & (g)	Standard Terms and Conditions	The permit does not convey any property rights of any sort, nor any exclusive privilege.	Yes.	Annual Compliance Audit.
AQ0486TVP03 – Condition 45	18 AAC 50.326(j)(1), 50.400 & 50.403	Administration Fees	The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-405.	Yes.	Annual Compliance Audit.
AQ0486TVP03 – Condition 46 and 47	18 AAC 50.040(j)(3), 50.035, 50.326(j)(1), 50.410, & 50.420	Assessable Emissions	The Permittee shall pay the Department an annual emission fee based on the assessable emissions of the source. Calculate assessable emissions and submit them to the Department by March 31 or plan to pay fees based on the potential emissions.	Yes.	See Standard Permit Condition I.
AQ0486TVP03 – Condition 49	18 AAC 50.045(a)	Dilution	The Permittee shall not dilute emissions with air to comply with this permit.	Yes.	Annual Compliance Audit.
AQ0486TVP03 – Condition 50	18 AAC 50.045(d), 50.040(e), 50.326(j)(3), & 50.346(c)	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.	Yes.	See Condition 50.1.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0486TVP03 – Condition 51	18 AAC 50.055(g)	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 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.	Yes.	Annual Compliance Audit.
AQ0486TVP03 – Condition 52	18 AAC 50.110, 50.040(e), 50.326(j)(3), 50.346(a) 40 CFR 71.6(a)(3)	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 interferes with the enjoyment of life or property.	Yes.	See Condition 52.1 and Standard Permit Condition II.
AQ0486TVP03 – Condition 53	18 AAC 50.235(a), 50.326(j)(4), & 50.040(j)(4) 40 CFR 71.6(c)(6)	Technology-Based Emissions Standard	If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard listed in Condition 29, 30, or 33, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under Condition 80 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 80.	Yes.	Annual Compliance Audit.

FORM E1

Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0486TVP03 – Condition 54	18 AAC 50.065, 50.040(j), & 50.326(j) 40 CFR 71.6(a)(3)	Open Burning Requirements	The Permittee shall comply with the requirements of 18 AAC 50.065 by not engaging in any open burning activities at the hospital.	Yes.	Annual Compliance Audit.
AQ0486TVP03 – Condition 55	18 AAC 50.220(a) & 50.345(a) & (k)	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.	Yes.	Annual Compliance Audit.
AQ0486TVP03 – Condition 56	18 AAC 50.220(b)	Operating Conditions	Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing at a point or points that characterize the actual discharge into the ambient air; and at the maximum rated burning or operating capacity of the emission unit or another rate determined by the Department to characterize the actual discharge into the ambient air.	Yes.	Annual Compliance Audit
AQ0486TVP03 – Condition 57	18 AAC 50.220(c)(1)(A) & 50.040(a) 40 CFR 60	Reference Test Methods	The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit.	Yes.	See Condition 57.1 through 57.7.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0486TVP03 – Condition 58	18 AAC 50.220(c)(3) & 50.990(102)	Excess Air Requirements	To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific emission unit type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).	Yes.	Annual Compliance Audit.
AQ0486TVP03 – Condition 59	18 AAC 50.345(a)	Test Exemption	The Permittee is not required to comply with Conditions 61, 62, and 63 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.2).	Yes.	Annual Compliance Audit.
AQ0486TVP03 – Condition 60	18 AAC 50.345(a) & (l)	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.	Yes.	Annual Compliance Audit.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0486TVP03 – Condition 61	18 AAC 50.345(a) & (m)	Test Plans	Except as provided in Condition 59, 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 emission 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 66 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 performed without resubmitting the plan.	Yes.	Annual Compliance Audit.
AQ0486TVP03 – Condition 62	18 AAC 50.345(a) & (n)	Test Notification	Except as provided in Condition 59 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.	Yes.	Annual Compliance Audit.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0486TVP03 – Condition 63	18 AAC 50.345(a) & (o)	Test Reports	Except as provided in Condition 59, within 60 days after completing a source test, the Permittee shall submit two copies 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 additionally certify the results in the manner set out in Condition 77. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.	Yes.	Annual Compliance Report.
AQ0486TVP03 – Condition 64	18 AAC 50.220(f)	Particulate Matter Calculations	In source testing for compliance with the particulate matter standards in Conditions 5 and 21.2, the three-hour average is determined using the average of three one-hour test runs.	Yes.	Annual Compliance Audit.
AQ0486TVP03 – Condition 65	18 AAC 50.040(a), 50.326(j), 40 CFR 60.7(f), Subpart A, 40 CFR 71.6(a)(3)(ii)(B)	Recordkeeping Requirements	The Permittee shall keep all records required by this permit for at least five years after the date of collection.	Yes.	See Condition 65.1 and 65.2.
AQ0486TVP03 – Condition 66	18 AAC 50.345(a)(j), 50.205, 50.326(j)	Certification	The Permittee shall certify all reports, compliance certifications or other documents.	Yes.	See Condition 66.1 and Standard Permit Condition XVII.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0486TVP03 – Condition 67	18 AAC 50.326(j) 40 CFR 71.6(a)(3)(iii)(A)	Submittals	The Permittee shall submit two copies of reports, compliance certifications and other submittals require by the permit to the Department.	Yes.	See Condition 67.1 and Standard Permit Condition XVII
AQ0486TVP03 – Condition 68	18 AAC 50.345(a) & (i), 50.200, 50.326(a) & (j)	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.	Yes.	Annual Compliance Audit.
AQ0486TVP03 – Condition 69	18 AAC 50.235(a)(2), 50.240(c), 50.326(j)(3), 50.346(b)(2) & (3)	Excess Emissions and Permit Deviation Reports	The Permittee shall report all emissions or operations that exceed or deviate from the permit.	Yes.	See Condition 69.1 through 69.3 and Standard Permit Condition III.
AQ0486TVP03 – Condition 70	18 AAC 50.346(b)(6), 50.326(j) 40 CFR 71.6(a)(3)(iii)(A)	Operating Reports	The Permittee shall report all emissions or operations that exceed or deviate from the permit.	Yes.	See Condition 70.1 through 70.5 and Standard Permit Condition VII.

FORM E1

Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0486TVP03 – Condition 71	18 AAC 50.205, 50.345(a) & (j), 50.326(j), 40 CFR 71.6(c)(5)	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 67.	Yes.	See Condition 71.1 through 71.3.
AQ0486TVP03 – Condition 72	18 AAC 50.346(b)(8), 50.200 40 CFR 51.15, 51.30(a)(1), Appendix A to Subpart A	Emission Inventory Reporting	The Permittee shall submit to the Department reports of actual emissions, by emissions unit, of CO, NH3, NOx, PM10, PM2.5, SO2, VOCs and lead (Pb) (and lead compounds) using the form in Section 14 of this permit, as follows:	Yes.	See Condition 72.1 through 72.4 and Standard Permit Condition XV and XVI.
AQ0486TVP03 – Condition 73	18 AAC 50.040(j)(7), 50.326(a), 50.346(b)(7) 40 CFR 71.10(d)(1)	Permit Applications and Submittals	The Permittee shall comply with the requirements for submitting application information to the US Environmental Protection Agency (EPA).	Yes.	See Condition 73.1 through 73.4.
AQ0486TVP03 – Condition 74	18 AAC 50.040(j)(4), 50.326(j), & 40 CFR 71.6(a)(8)	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.	Yes.	Annual Compliance Audit.

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0486TVP03 – Condition 75	18 AAC 50.040(j)(4), 50.326(j), & 40 CFR 71.6(a)(12)	Off Permit Changes	The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 C.F.R. 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:	Yes.	See Conditions 75.1 through 75.4.
AQ0486TVP03 – Condition 76	18 AAC 50.040(j)(4), 50.326(j), & 40 CFR 71.6(a)(13)	Operational Flexibility	The Permittee may make 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):	Yes.	See Conditions 76.1 through 76.2.
AQ0486TVP03 – Condition 77	18 AAC 50.040(j)(3), 50.326(c)(2), (j)(2), & 40 CFR 71.5(a)(1)(iii), 71.7(b), (c)(1)(ii)	Permit Renewal	To renew this permit, the Permittee shall submit an application under 18 AAC 50.326. The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 C.F.R. 71.7(b) and 71.5(a)(1)(iii).	Yes.	Annual Compliance Audit.

FORM E1

Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0486TVP03 – Condition 78 through 83	18 AAC 50.326(j)(3)	General Compliance Requirements	The Permittee shall comply with each permit term and condition and allow the Department access to the facility.	Yes.	Annual Compliance Audit.

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM E2

Permit-to-Operate and Minor Permit Condition Change Request

Permit Number: AQ0486TVP03

Permit-to-Operate and Minor Permit Information (*attach additional sheets as needed*):

Permit-to-Operate or Minor Permit Number	Condition Number	Type of change (revise or remove)	Reason for change	Requested Alaska Title V Operating Permit Condition
Minor Permit No. AQ0486MSS02	6.2a	Remove	The condition is unnecessary to confirm compliance with Section 3 of AQ0486MSS01.	Remove Conditon 18.2a.
Minor Permit No. AQ0486MSS02	6.2b	Remove	The condition is unnecessary to confirm compliance with Condition 10 of AQ0486MSS02.	Remove Conditon 18.2b.

FORM E3

Title V Condition Change Request

Permit Number: AQ0486TVP03

Title V Permit Information (*attach additional sheets as needed*):

Current Title V Operating Permit Condition Number	Type of change (revise or remove)	Reason for change	Requested Alaska Title V Operating Permit Condition
AQ0486TVP03 – Table A	Revise	EU ID 27 was removed from the source. EU ID 46 does not exist and will not be purchased and installed.	Remove EU IDs 27 and 46.
AQ0486TVP03 – Conditions 1, 1.1, 2, 3, 4, 5, 5.1, 6, 13, 13.2, 18.1b, 19, 20, 20.1, 20.5a, 29, 29.1, 29.7b, 32, 32.1	Revise	EU ID 46 does not exist and will not be purchased and installed.	Revise the conditions as follows: 42 through ~~46~~ 45
AQ0486TVP03 – Condition 2.2a(iii)	Remove	EU ID 46 does not exist and will not be purchased and installed.	Remove the condition. ~~(iii) Observe the exhaust of EU ID 46 within 90 days after startup.~~
AQ0486TVP03 – Condition 1.2	Revise	EU IDs 28 and 29 can only burn gas as fuel.	Revise the condition as follows: For EU IDs 28 and 29, burn only gas as fuel. Monitoring for these emissions units shall consist of a statement in each operating report under Condition 70 indicating whether each of these emissions units burned only gas during the period covered by the report. ~~Report under Condition 69 if any fuel other than gas is burned.~~

AQ0486TVP03 – Condition 5.2	Revise	EU IDs 28 and 29 can only burn gas as fuel.	Revise the conditions as follows: For EU IDs 28 and 29, burn only gas as fuel. Monitoring for these emissions units shall consist of a statement in each operating report under Condition 70 indicating whether each of these emissions units fired only gas during the period covered by the report. ~~Report under Condition 69 if any fuel other than gas is burned.~~
AQ0486TVP03 – Condition 7	Remove	EU ID 46 does not exist and will not be purchased and installed.	Remove the condition. ~~Particulate Matter Recordkeeping. Within 180 calendar days of installation of the emissions unit, the Permittee shall record the exhaust stack diameter of EU ID 46. Report the stack diameter in the next operating report under Condition 70.~~
AQ0486TVP03 – Condition 18.2	Remove	This condition is redundant.	~~Operational Limits:~~ ~~a. Comply with the existing owner requested limits currently described in Conditions 14 through 17; and~~ ~~b. Comply with Condition 19.~~
AQ0486TVP03 – Condition 32.2	Revise	Revise the permit condition for clarity. No EU IDs are listed in 32.2a	Revise the condition as follows: For EU IDs 17, 22, 30, and 35, the emergency stationary RICE ~~listed in Condition 32.2.a~~ are not subject to NESHAP Subpart ZZZZ…
AQ0486TVP03 – Condition 33	Revise	EU IDs 28 and 29 can only burn gas as fuel and are exempt from Subpart JJJJJJ per 40 CFR 63.11195(e).	NESHAP Subpart JJJJJJ Applicability. For EU IDs 1 through 4~~, 28, 29,~~ and 52, comply with the following applicable requirements of NESHAP Subpart JJJJJJ.
AQ0486TVP03 – Condition 33.2	Revise	EU IDs 28 and 29 can only burn gas as fuel and are exempt from Subpart JJJJJJ per 40 CFR 63.11195(e).	Revise the condition as follows: For EU IDs 1 through 4~~, 28, 29,~~ and 52, comply with the following:

AQ0486TVP03 – Condition 48	Revise	EU IDs 69 and 70 are diesel storage tanks listed as insignificant emissions units and are not applicable under Standard Permit Condition VI. EU ID 27 was removed from the source.	**Good Air Pollution Control Practice.** The Permittee shall do the following for EU IDs 1, 2, 17, 22, ~~27,~~ 30, and 35~~, 69, and 70:~~

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Appendix F Permits

Application for Renewal of an Air Quality Operating Permit

Providence Alaska Medical Center

Providence Health System – Washington Inc.

SLR Project No.: 105.00541.23001

January 8, 2024

F.1 Permit No. AQ0486MSS01

F.2 Permit No. AQ0486MSS02

F.3 Permit No. AQ0486TVP03

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

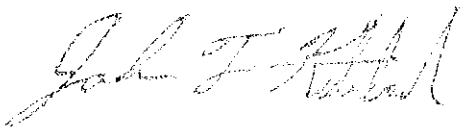
Permit No. AQ0486MSS01
Rescinds Permit No 0121-AC005 and
Rescinds ORL AQ0486ORL01

Date- Final February 24, 2006

The Department of Environmental Conservation, under the authority of AS 46.03, AS 46.14, 6 AAC 50, 18 AAC 15 and 18 AAC 50, issues this Air Quality Control Minor Permit to:

Owner(s):	Providence Health System-Washington Inc.
Operator:	Providence Health System-Washington Inc. 506 Second Avenue Suite 1200 Seattle, WA 98104-2329
Stationary Source:	Providence Alaska Medical Center
Location:	Latitude 60^0 11' 19" North; Longitude 149^0 49' 03" West
Physical Address:	3200 Providence Drive Anchorage Alaska 99519
Permit Contact:	Tim Michael (907) 261-5000

This minor permit 1) rescinds operating permit No. 486TVP01; 2) revokes owner requested limit (ORL) AQ0486ORL01; 3) rescinds construction permit No. 0121-AC005 and 4) incorporates the operational restrictions contained in permit No. 486TVP01 and AQ0486ORL01; in accordance with the terms and conditions of this permit, and as described in the original permit application.



John F. Kuterbach, Manager
Air Permits Program

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Table of Contents

List of Abbreviations Used in this Permit

AAC ..... Alaska Administrative Code
ADEC ..... Alaska Department of Environmental Conservation
AS ..... Alaska Statutes
C.F.R. ..... Code of Federal Regulations
dscf ..... Dry standard cubic feet
EPA ..... US Environmental Protection Agency
gr./dscf ..... grain per dry standard cubic feet (1 pound = 7000 grains)
ID ..... Source Identification Number
NSPS ..... Federal New Source Performance Standards [as defined in 40 C.F.R. 60]
PAMC ..... Providence Alaska Medical Center
ppm ..... Parts per million
PS ..... Performance specification
PSD ..... Prevention of Significant Deterioration
SO_2 ..... Sulfur dioxide
TPY ..... Tons per year
VOC ..... volatile organic compound [as defined in 18 AAC 50.990(103)]
wt% ..... weight percent

Section 1. General Emission Unit Information

This emission units listed in Table 1 have specific monitoring and recordkeeping, or reporting conditions in this permit. Emission unit description and ratings are given for identification purposes only.

Table 1 Emission Unit Inventory

ID	Equip No.	Unit Name	Unit Description	Fuel	Rating/size	Install Date
Boilers and Heaters						
1	SB-03	Steam Boiler	E. Keller	Dual fuel	38.5 MMBtu/hr	1974
2	SB-04	Steam Boiler	E. Keller	Dual fuel	38.5 MMBtu/hr	1974
3	SB-05	Steam Boiler	Nebraska	Dual fuel	49.0 MMBtu/hr	1990
4	SB-06	Steam Boiler	Cleaver Brooks	Dual fuel	42.2 MMBtu/hr	2000
9	UH-701	Heater	Modine	Natural gas	0.140 MMBtu/hr	
10	UH-702	Heater	Modine	Natural gas	0.175 MMBtu/hr	
11	UH-703	Heater	Modine	Natural gas	0.200 MMBtu/hr	
12	SF-701	Supply Fan/Heater	Renzor Duct Furnace	Natural gas	0.250 MMBtu/hr	
13	HB-401	Hydronic Boiler	Weil McCain	Natural gas	0.208 MMBtu/hr	
14	HWH-401	Water Heater	Smith Water Products	Natural gas	0.420 MMBtu/hr	
15	HB-501	Hydronic Boiler	Weil McCain	Natural gas	0.800 MMBtu/hr	
16	HWH-501	Water Heater	Rheem Manufacturing	Natural gas	0.200 MMBtu/hr	
18	HWH-201	Water Heater	Smith Water Products	Natural gas	0.420 MMBtu/hr	
19	HWH-301	Water Heater	PVI Industries	Natural gas	0.400 MMBtu/hr	
20	HB-301	Boiler	Burnham	Natural gas	2.10 MMBtu/hr	
21	HB-302	Boiler	Burnham	Natural gas	2.10 MMBtu/hr	
23	HWH-601	Water Heater	PVI Industries	Natural gas	0.140 MMBtu/hr	
24	HB-601	Water Heater	Burnham	Natural gas	0.396 MMBtu/hr	
25	HB-602	Water Heater	Burnham	Natural gas	0.396 MMBtu/hr	
26	HWH-701	Water Heater	State Industries	Natural gas	0.060 MMBtu/hr	
	B-1	MOB Hub Boiler 1	Bryan	Natural gas	12.6 MMBtu/hr	
	B-2	MOB Hub Boiler 2	Bryan	Natural gas	12.6 MMBtu/hr	
	B-5	MOB Hub Boiler 5	Aero	Natural gas	1.00 MMBtu/hr	
	B-6	MOB Hub Boiler 6	Aero	Natural gas	1.00 MMBtu/hr	
	API-1	API Boiler 1	Unknown	Natural gas	4.00 MMBtu/hr	2005
	API-2	API Boiler 2	Unknown	Natural gas	4.00 MMBtu/hr	2005
	API-4	API Heater 1	Unknown	Natural gas	1.00 MMBtu/hr	2005
	API-5	API Heater 2	Unknown	Natural gas	1.00 MMBtu/hr	2005
Emergency Generators						
5	G-01	Emergency Generator	Cummins	Diesel	1,000 kW	1985
6	G-02	Emergency Generator	Cummins	Diesel	1,000 kW	1985
7	G-03	Emergency Generator	Solar Turbine	Diesel	900 kW	1976
8	G-04	Emergency Generator	Detroit	Diesel	400 kW	1976
17	G-201	Emergency Generator	Cummins	Diesel	300 kW	1990
22	G-301	Emergency Generator	Komatsu	Diesel	450 kW	1992
	G-1	MOB Emergency Generator	Cummins	Diesel	846 kW	2005
	API-3	API Emergency Generator	Cummins	Diesel	846 kW	2005
Fuel Storage Tanks						
27	UST-1	Distillate Tank	Diesel fuel Storage	Diesel	19,800 Gal.	1992

Section 2. Fee Requirements

1. **Assessable Emissions.** The permittee shall pay to the department an annual emission fee based on the 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 contaminants that the source emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of:

   1.1 the sources's assessable potential to emit of 196 tpy; or

   1.2 the source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the department, when demonstrated by:

   1.3 an enforceable test method described in 18 AAC 50.220;

   1.4 material balance calculations;

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

   1.6 other methods and calculations approved by the department.

2. **Assessable Emission Estimates.** The permittee shall submit assessable emission estimates as follows:

   2.1 No later than March 31 of each year, the permittee may submit an estimate of the source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emission Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795. 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

   2.2 if no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in condition 1.1.

Section 3. Industrial Processes and Fuel Burning Equipment

3. **Visible Emissions**. Except for non-road engines, the permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from fuel burning units listed in Table 1, to reduce visibility through the exhaust effluent by any of the following:

   a. more than 20 percent for a total of more than three minutes in any one hour;

   b. more than 20 percent averaged over any six consecutive minutes.

   3.2 For unit SB-06, monitor record and report according to condition 17

4. **Particulate Matter (PM).** Except for non-road engines, the permittee shall not cause or allow PM emissions from fuel burning units listed in Table 1 to exceed 0.05 grains per dry standard cubic foot (gr./dscs) of exhaust gas corrected to standard conditions and averaged over three hours.

   4.1 For unit SB-06 monitor record and report according to condition 17

5. **Sulfur Compound Emissions.** Except for non-road engines the permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from fuel burning units listed in Table 1 to exceed 500 ppm averaged over three hours. Ensure compliance with this requirement by complying with conditions 9.1 and 9.2.

6. **Emergency Generator Hourly Limits.** Limit the operations of Units G-01 through G-04, G-201, G-301 and G-1 to no more than 250 hours each in any 12 consecutive month period.

   6.1 Monitor and record the hours of operation for each occasion the engines operate.

   6.2 Report using the operating report under condition 29, the hours of operation for the twelve consecutive month period for the months covered in the operating report.

7. **Boiler Distillate Oil Limits**. Limit the combined distillate fuel oil burned in Units SB-03, SB-04, SB-05 and SB-06 to no more than 500,000 gallons in any 12 consecutive month period.

   7.1 Monitor and record the combined monthly distillate oil burned in Units SB-03, SB-04, SB-05 and SB-06. Measure the distillate oil burned using an inline meter or tank level-based meter system in the tank(s) dedicated to the boilers.

   7.2 Calculate the 12 month rolling total combined distillate oil burned for each month as follows:

      a. Except as provided in condition 7.2b, before submitting each semiannual operating report required under condition 29 of this permit, calculate the combined distillate fuel burned for each 12 month period ending with a calendar month during the reporting period.

b. If the combined distillate fuel burned is greater than 250,000 gallons for any 12 consecutive month period, then for every subsequent 12 month period, calculate the total distillate fuel burned by the end of the month following that 12 month period.

7.3 Report using the operating report under condition 29, the total distillate oil burned for each twelve consecutive month period ending during the time covered by the operating report.

8. Boiler Natural Gas Limits. Limit the combined natural gas burned in Units SB-03, SB-04, SB-05, SB-06, B1 and B2 to no more than 1,000 million standard cubic feet in any 12 consecutive month period.

8.1 Monitor and record the combined monthly natural gas burned in Units SB-03, SB-04, SB-05, SB-06, B1 and B2. Measure the natural gas burned using flow meters or measurement techniques and calculations approved by the department.

8.2 Calculate the 12 month rolling total combined natural gas burned for each month as follows:

a. Except as provided in condition 8.2b, before submitting each semiannual operating report required under condition 29 of this permit, calculate the combined distillate fuel for each 12 month period ending with a calendar month during the reporting period.

b. If the combined natural gas burned is greater than 500,000 standard cubic feet in any 12 consecutive month period, then for every subsequent 12 month period, calculate the total natural gas burned by the end of the month following that 12 month period.

8.3 Report using the operating report under condition 29, the total natural gas burned for each twelve consecutive month period ending during the time covered by the operating report.

9. Sulfur Limits.

9.1 Limit the fuel sulfur content of the distillate fuel oil burned in the stationary source to no greater than 0.5 percent by weight by burning only No. 1 or No. 2 grade distillate oil

9.2 Burn pipeline quality natural gas in the gas fired units. Pipeline quality gas means natural gas with total sulfur content not to exceed 12 grains per 100 standard cubic feet of gas.

9.3 For fuel oil, obtain a statement or receipt from the fuel supplier for each fuel shipment received that documents the fuel sulfur content or grade of fuel. If a statement or receipt is not available from the supplier, analyze a representative sample of the fuel after each shipment to determine the sulfur content using ASTM

Method D 396-92 or D 975-94, or an alternative method approved by the department.

9.4 For natural gas fuel, state in each operating report that all gas burned in the facility was gas received by pipeline.

9.5 Attach copies of the fuel sulfur content analyses, if required and documentation with the operating report required by condition 29.

9.6 Report as a permit deviation under condition 28 whenever fuel combusted does not meet the requirements of condition 9.1 or 9.2.

Section 4. General Source Testing and Monitoring Requirements

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

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

    11.1 At a point or points that characterize the actual discharge into the ambient air; and

    11.2 At the maximum rated burning or operating capacity of the source or another rate determined by the department to characterize the actual discharge into the ambient air.

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

    12.1 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Section 9 of this permit. Visibility source testing is exempt from the requirements listed in Conditions 14 through 16. Except as otherwise directed by the department, attach visible emission source testing results to the operating report required by Condition 29 of this permit.

    12.2 Source testing for emissions of particulate matter must be conducted in accordance with the methods and procedures specified 40 C.F.R. 60, Appendix A.

    12.3 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M.

    12.4 Source testing for emissions of any contaminant may be determined using an alternative method approved by the department in accordance with Method 301 in Appendix A to 40 C.F.R. 63.

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

14. **Test Plans.** 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 source will operate during the test and how the Permittee will document this operation. A complete plan must be submitted within 60 days of receiving a request under Condition 10, and at least 30 days before the scheduled date of any tests.

15. **Test Notification.** At least 10 days before conducting a source test, the Permittee shall give the department written notice of the date and time the source test will begin.

16. **Test Reports.** Within 45 days after completing a source test, the Permittee shall submit two copies of the results, to the extent practical, in the format set out in the *Source Test Report Outline* of Volume III, Section IV.3, of the State Air Quality Control Plan, adopted by reference in 18 AAC 50.030(8). The Permittee shall certify the results as set out in Condition 24 of this permit.

Section 5. Visible Emissions and Particulate Matter Monitoring Plan for SB-06

Visible Emissions Observations

17. Permittee shall observe the exhaust of unit SB-06 for 18 minutes to obtain 72 consecutive 15- second readings in accordance with Section 4 and Section 9 of this permit if cumulative operation on diesel fuel exceed 400 hours in any calendar year as follows:

17.1 If the unit continues to be operated on diesel fuel after exceeding the 400 hours on diesel fuel, then conduct visible emissions within seven days of exceeding the 400 hours;

17.2 If within seven days of exceeding 400 hours on diesel fuel, the unit is switched to natural gas, then conduct visible emissions at the time of the next scheduled testing for diesel firing capability;

17.3 Record the following information in a written log for each observation:

a. The date and time of the observation;

b. Whether visible emissions are present or absent in the exhaust;

c. If the unit starts operation on the day of the observation, the startup time of the source; and

d. Name, title, and signature of the person making the observation.

Corrective Actions Based on Visible Emissions Observations

18. If visible emissions are present in the exhaust during an observation performed under Condition 17, the Permittee shall

18.1 If visible emissions persist, take actions to reduce visible emissions from the source within 24 hours of the observation;

18.2 Keep a written record of the starting date and the completion date of the visible emission, and a description of the actions taken to reduce visible emissions;

18.3 After completing the actions taken to reduce visible emissions, immediately upon startup of the source, observe the source exhaust for visible emissions as described under Condition 17.3a through 17.3d; and

18.4 If visible emissions are still present in the exhaust during an observation performed under Condition 18.3, then take action to reduce visible emissions as detailed in Conditions 18.1 and 18.2. Within 14 days after subsequent startup, observe the exhaust for 18 minutes to obtain 72 individual 15-second reading in accordance with Section 9 of this permit.

Particulate Matter Testing

19. Upon department request and as required by this permit, the Permittee shall conduct tests to determine the concentration of particulate matter in the exhaust of a source as follows:

19.1 Conduct the tests according to the requirements set out in Section 4 of this permit; and

19.2 During each test, observe visible emissions in accordance with Section 8 and calculate the average opacity that was measured during the test. Submit the results of the visible emission observations and the calculation with the source test report.

Reporting Requirements

20. The Permittee is not required to comply with Conditions 14, 15, and 16 while observing visible emissions.

21. For all visible emissions observations taken under Conditions 17 and 18.4, the Permittee shall submit copies of observation results with the facility report required by Condition 29.

22. For all tests to determine the particulate matter in the exhaust of a source conducted under Condition 19, the Permittee shall report as set out in Section 4.

23. The Permittee shall submit a report in accordance with Condition 28 if:

23.1 A visible emission observation results in 13 or more 15-seconds readings with an opacity greater than 20% for Unit SB-06; or

23.2 The results of a test for particulate matter exceed the particulate matter emission limit.

Section 6. General Recordkeeping, Reporting, and Compliance Certification Requirements

24. Certification. The permittee shall certify all reports, or other documents 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.

25. Submittals. Unless otherwise directed by the department or this permit, the permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.

26. 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 this permit. The department may require the permittee to furnish copies of those records directly to the federal administrator.

27. Recordkeeping Requirements. The permittee shall keep all records required by this permit for at least five years after the date of collection, including

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

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

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

27.4 sampling dates and times of sampling or measurements;

27.5 the operating conditions that existed at the time of sampling or measurement;

27.6 the date analyses were performed;

27.7 the location where samples were taken;

27.8 the company or entity that performed the sampling and analyses;

27.9 the analytical techniques or methods used in the analyses; and

27.10 the results of the analyses.

28. Excess Emission and Permit Deviation Reports.

28.1 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 of the end of the month in which the emissions or deviation occurs or was discovered, except as provided in conditions 28.1c(ii) and

(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 28.1c(i).

28.2 When reporting excess emissions, the permittee must report using either the department's on-line form, which can be found at http://www.state.ak.us/dec/air/ap/docs/eeform.pdf, or, if the permittee prefers, the form contained in Section 10 of this permit. The permittee must provide all information called for by the form that is used.

28.3 When reporting a permit deviation, the permittee must use either the department's on-line form, which can be found at http://www.state.ak.us/dec/air/apm/docs/eeform.pdf or if the permittee prefers, the form contained in Section 10 of this permit. The permittee must provide all information called for by the form that is used.

28.4 If requested by the department, the permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

29. Operating Reports. During the life of this permit, the permittee shall submit an original and two copies of an operating report by August 1 for the period January 1 to June 30 and by February 1 for the period July 1 to December 31 of the previous year.

29.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

29.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 29.1, either

29.3 The permittee shall identify

(i) the date of the deviation;

(ii) the equipment involved;

(iii) the permit condition affected;

(iv) a description of the excess emissions or permit deviation; and

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

b. when excess emissions or permit deviations have already been reported under condition 28 the permittee may cite the date or dates of those reports.

Section 7. Generally Applicable Requirements

30. **Good Air Pollution Control Practice for SB-06.** The Permittee shall install, maintain and operate, in accordance with manufacturer's procedures, fuel burning equipment, process equipment, emission control devices, testing equipment, and monitoring equipment to provide optimum control of air contaminant emissions during all operating periods.

31. **Dilution.** The permittee shall not dilute emissions with air to comply with this permit.

32. **Modification**. The Permittee shall not construct, operate, or modify a source that will result in a violation of the applicable emission standards or that will interfere with the attainment or maintenance of the ambient air quality standards or maximum allowable ambient concentrations.

    32.1 Obtain all permits or permit revisions required for construction, modification, or operation under 18 AAC 50 and AS 46.14.

    32.2 Comply with the conditions of all permits obtained under 18 AAC 50 and AS 46.14.

33. **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 source constructed or modified after November 1, 1982, unless approved in writing by the department.

34. **Open Burning.** The Permittee shall comply with 18 AAC 50.040 by not engaging in any open burning activities at the hospital.

35. **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.

    35.1 If emissions present a potential threat to human health or safety, the permittee shall report any such emissions according to condition 28.

    35.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the permittee shall investigate the complaint to identify emissions that the permittee believes have caused or are causing a violation of condition 32.

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

        a. after an investigation because of a complaint or other reason, the permittee believes that emissions from the facility have caused or are causing a violation of condition 32; or

b. the department notifies the permittee that it has found a violation of condition 32.

35.4 The permittee shall keep records of:

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

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

c. a summary of any investigation, including reasons the permittee does or does not believe the emissions have caused a violation of condition 32; and

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

35.5 With each facility operating report under condition 29, the permittee shall include a brief summary report which must include:

a. the number of complaints received;

b. the number of times the permittee or the department found corrective action necessary;

c. the number of times action was taken on a complaint within 24 hours; and

d. the status of corrective actions the permittee or department found necessary that were not taken within 24 hours.

35.6 The permittee shall notify the department of a complaint that is attributable to emissions from the facility within 24 hours after receiving the complaint, unless the permittee has initiated corrective action within 24 hours of receiving the complaint.

36. Technology-Based Emission Standard. If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235, causes emissions in excess of a technology-based emission standard, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.

Section 8. Conditions Describing the Effect of this Permit

37. 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 as not federally-enforceable, the Clean Air Act, and is grounds for:

a. an enforcement action,

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

38. 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.

39. 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 this permit.

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

a. included and specifically identified in the permit, or

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

41. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any operating permit condition.

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

43. The permittee shall allow an officer or employee of 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:

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

b. have access to and copy any records required by the permit,

c. inspect any facilities, equipment, practices, or operations regulated by or referenced in the permit, and

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

Section 9. Visible Emissions Forms

Visible Emissions Field Data Sheet

Certified Observer: _____

Company: _____

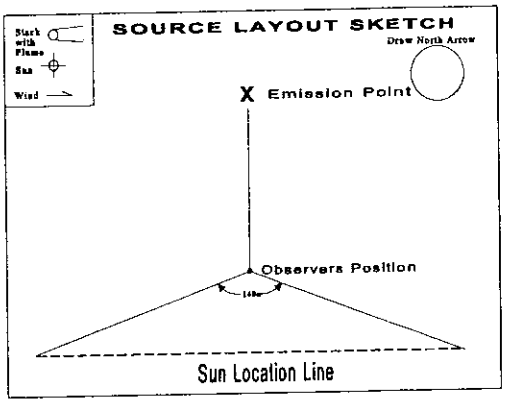
Location: _____

Test No.: _____ Date: _____

Source: _____

Unit Operating Hours: _____

Hrs. of observation: _____



Clock Time	Initial				Final
Observer location Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description: Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Visible Emissions Observation Record

Page ___ of ___

Company _____ Certified Observer_____

Test Number _____ Clock time_____

Date:		Visibility reduction every 15 Seconds (Opacity)				Steam Plume (check if applicable)		Comments
Hr	Min	0	15	30	45	Attached	Detached	

Additional information:

_____
Observer Signature

Data Reduction:
Duration of Observation Period (minutes) _____
Number of Observations _____
Number of Observations exceeding 20 percent _____

Average Opacity Summary

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 10. ADEC Notification Form

Fax this form to: (907) 269-7508 Telephone: (907) 269-8888

Providence Alaska Medical Center
Stationary Source Name

Reason for notification:

❑ **Excess Emissions**
If you checked this box
Fill out section 1

❑ **Other Deviation from Permit Condition**
If you checked this box
fill out section 2

When did you discover the Excess Emissions or Other Deviation?
Date:__/__/__ Time:__:__

Section 1. Excess Emissions

(a) Event Information (Use 24-hour clock):

	START Time: (hr:min):	**END** Time:	**Duration**
Date: _____	_____:_____	_____:_____	_____:_____
Date: _____	_____:_____	_____:_____	_____:_____
		Total:	_____:_____

(b) Cause of Event (Check all that apply):

❑ START UP ❑ UPSET CONDITION ❑ CONTROL EQUIPMENT
❑ SHUT DOWN ❑ SCHEDULED MAINTENANCE ❑ OTHER _____

Attach a detailed description of what happened, including the parameters or operating conditions exceeded.

(c) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____

(d) Emission Limit Potentially Exceeded

Identify each emission standard potentially exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Identify what observation or data prompted this report. Attach additional sheets as necessary.

Permit Condition	Limit	Emissions Observed
_____	_____	_____
_____	_____	_____

(e) Excess Emission Reduction:

Attach a description of the measures taken to minimize and/or control emissions during the event.

(f) Corrective Actions:

Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence.

(g) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable?

❑ YES ❑ NO

Do you intend to assert the affirmative defense of 18 AAC 50.235?

❑ YES ❑ NO

Section 2. Other Permit Deviations

(a) Sources Involved:

Identify each emission source involved in the event, using the same identification number and name as in the permit. List any control device or monitoring system affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device

(b) Permit Condition Deviation:

Identify each permit condition deviation or potential deviation. Attach additional sheets as necessary.

Permit Condition	Potential Deviation

(c) Corrective Actions:

Attach a description of actions taken to correct the deviation or potential deviation and to prevent recurrence.

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: Signature: Date:

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION
DIVISION OF AIR QUALITY
AIR PERMITS PROGRAM

SEAN PARNELL, GOVERNOR
410 Willoughby Ave., Suite 303
P. O. Box 111800
Juneau AK 99811-1800
PHONE :(907) 465-5100
FAX :(907) 465-5129
TDD/TTY :(907) 465-5040
ttp://www.dec.state.ak.us

CERTIFIED MAIL: 7004 1160 0007 3656 0666
Return Receipt Requested

August 25, 2010

Robert Honeycutt
Assistant Administrator for Ancillary Services
Providence Alaska Medical Center
P. O. Box 196604
Anchorage, AK 99519

Subject: Final Decision to Approve Minor Permit Application for Providence Health System-Washington's Providence Alaska Medical Center Emergency Power Supply System: Air Quality Control Minor Permit AQ0486MSS02

Dear Mr. Honeycutt:

Under the authority of AS 46.14.170, the Alaska Department of Environmental Conservation (the Department) is issuing the enclosed final air quality control minor permit and technical analysis report (TAR) for Providence Health System-Washington's Providence Alaska Medical Center. The permit contains the applicable provisions of AS 46.14 and 18 AAC 50. The terms and conditions of this minor permit remain effective until modified or revoked by the Department, regardless of any change in ownership of the stationary source or its emission units. The responsibilities imposed by this minor permit may not be transferred without the written consent of the Department.

On July 9, 2010, the Department provided opportunity for public comment on the preliminary decision by posting a public notice on our website. The Department received comments on the minor permit from the applicant. The Department addressed the comments and revised the permit as necessary.

Providence Health Systems-Washington may operate under the terms and conditions of this minor permit upon issuance.

Please note that Alaska's air quality statutes, regulations and permit application information can be obtained from the Department's web page at the following address: http://www.dec.state.ak.us/air/ap/regulati.htm.

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 - 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Division

Director, 410 Willoughby Avenue, Suite 303, PO Box 111800, Juneau, Alaska 99811-1800, within 15 days of the permit decision.

Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, PO Box 111800, Juneau, Alaska 99811-1800, within 30 days of the permit decision. If a hearing is not requested within 30 days, the right to appeal is waived. More information on how to appeal a Department decision is available at http://www.dec.state.ak.us/commish/ReviewGuidance.htm.

Sincerely,

John F. Kuterbach,
Program Manager

Enclosures: Minor Permit No. AQ0486MSS02, TAR, and Response-to-Comments.

cc: Fathima Z. Siddeek, ADEC/APP, Juneau
Jim Baumgartner, ADEC/APP, Juneau
P. Moses Coss, ADEC/APP, Fairbanks
Debra Dalcher, ADEC/APP, Anchorage
Kwame Agyei, ADEC/APP, Juneau
Keith Quincey, Hoefler Consulting Group, Anchorage, kquincey@hoeflernet.com

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONTROL MINOR PERMIT

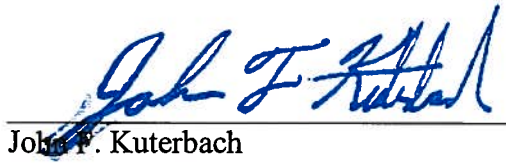
Permit AQ0486MSS02 **Final – August 25, 2010**
Revises Conditions 1 and 2 of Permit AQ0486MSS01

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ0486MSS02 to the Permittee listed below.

Operator and Permittee:	**Providence Health System-Washington Inc.** 506 Second Avenue, Suite 1200 Seattle, WA 98014-2329
Owner:	Providence Health System-Washington Inc.
Stationary Source	Providence Alaska Medical Center
Location:	Latitude 60° 11' 19" North; Longitude 149° 49' 03" West
Physical Address:	3200 Providence Drive, Anchorage, Alaska 99519
Permit Contact:	Dennis Hunt, Phone: (907) 261-5000
Project:	Emergency Power Supply System

This permit authorizes the installation and operation of five diesel-fired generators and a gas-fired heater. The project is classified under 18 AAC 50.502(c)(3)(A)(iii). The permit also establishes an Owner Requested Limit (ORL) under 18 AAC 50.508(5) to avoid Prevention of Significant Deterioration (PSD) review under 18 AAC 50.306. The permit satisfies the obligation of the Permittee to obtain a minor permit under 18 AAC 50.

This permit authorizes the Permittee to operate under the terms and conditions of this permit, and as described in the original permit application and subsequent application supplements listed in Section 9 except as specified in this permit.



John F. Kuterbach
Manager, Air Permits Program

Table of Contents

Section 1. Permit Administration:

1. Minor Permit AQ0486MSS01 remains in effect except as revised in Minor Permit AQ0486MSS02.

Section 2. Emission Unit Inventory

2. Emission Units (EU) Authorization. The Permittee is authorized to install and operate the emission units listed in Table 1 per the terms and conditions of this permit.[1, 2] Except as noted elsewhere in the permit, the information in Table 1 is for identification purposes only. The specific unit descriptions do not restrict the Permittee from replacing an emission unit identified in Table 1 with one of the same nominal rating and fuel type. The Permittee shall comply with all applicable provisions of AS 46.14 and 18 AAC 50 when installing a replacement emission unit, including any applicable minor or construction permit requirements.

Table 1 –Minor Permit Emission Unit Inventory

EUID	Description	Make/Model	Nominal Rating/Size	Fuel Type
EU37	Providence House Boiler	Aero BMK 2.0	2 MMBTU/hr	Natural Gas
EU38	MOBII Hub Boiler	Aero BMK 2.0	2 MMBTU/hr	Natural Gas
EU39	Tower S Emergency Generator	Cummings QSB7-G3	250 hp	Diesel
EU40	Tower S Boiler	Aero BMK 2.0	2 MMBTU/hr	Natural Gas
EU41	Child Care Building Boiler	Aero BMK 1.0	1 MMBTU/hr	Natural Gas
EU42	EPSS Generator 1	CAT D3516C	2,000 kW	Diesel
EU43	EPSS Generator 2	CAT D3516C	2,000 kW	Diesel
EU44	EPSS Generator 3	CAT D3516C	2,000 kW	Diesel
EU45	EPSS Generator 4	CAT D3516C	2,000 kW	Diesel
EU46	EPSS Generator 5	CAT D3516C	2,000 kW	Diesel
EU47	EPPS Heater	---	1.9 MMBTU/hr	Natural Gas

[1] The emission units listed in Table 1 are in addition to the emission units currently authorized under Table 1 of Minor Permit AQ0486MSS01.

[2] Emission units 37 through 41 are existing units installed subsequent to Minor Permit AQ0486MSS01. Emission Units 42 through 47 are new units authorized by Minor Permit AQ0486MSS02.

Section 3. Emission Fees

3. Conditions 1 and 2 of Minor Permit AQ0486MSS01, dated February 12, 2006 are rescinded and replaced with Conditions 4 and 5 of this minor permit.

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

4.1 the stationary source's assessable potential to emit of 252 TPY; or

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

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**.**

5. **Assessable Emission Estimates.** Emission fees will be assessed as follows:

5.1 no later than March 31st 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, 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

5.2 if no estimate is submitted on or before March 31st of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 4.1.

Section 4. Ambient Air Quality Protection Requirements

6. To protect the annual average NO_2 ambient air quality standard, the Permittee shall:

6.1 **Stack Configuration**:

a. Remove within ninety days of permit issuance the rain cap on the exhaust stack for Emission Unit 1 authorized in Minor Permit AQ0486MSS01.

(i) Provide as-built drawings and photographs of the revised exhaust stack of Emission Unit 1 in the first operating report due under Condition 29 of Minor Permit AQ0486MSS01 within ninety days of completing the installation of Emission Units 42 through 46, but before operating any of them.

(ii) Maintain the exhaust stack of Emission Unit 1 as a vertical release without a rain cap whenever Emission Unit is operating. Exhaust stack of Emission Unit 1 may be covered when Emission Unit 1 is not operating.

b. For Emission Units 42 through 46

(i) Install and maintain each exhaust stack as follows:

(A) A release height that equals or exceeds

(1) 53 feet above grade;

(2) seven feet above the generator building roof; and

(3) two feet above the highest portion (penthouse) of the generator building.

(B) Oriented at 60 degrees or more above the horizontal.

(ii) Provide as-built drawings and photographs of the exhaust stacks in the first operating report required under Condition 29 of Minor Permit AQ0486MSS01 that would be due after installation of the exhaust stacks.

6.2 **Operational Limits**:

a. Comply with the existing owner requested limits currently described in Section 3 of Minor Permit AQ0486MSS01; and

b. Comply with Condition 10.

Section 5. State Emission Standards

7. Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from the emission units listed in Table 1 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

7.1 For EU42 through EU46, verify the initial compliance with Condition 7 as follows:

a. Within 90 days after startup of EU42 through EU46, conduct a visible emissions source test on each emission unit in accordance with Reference Method 9. Use the form in Section 10 or another form previously approved by the Department to record data when conducting the Reference Method 9 source test.

b. Submit the results of the surveillance records to the Department within 30 days of completing the source test.

8. Particulate Matter. The Permittee shall not cause or allow particulate matter (PM) from the emission units listed in Table 1 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

9. Sulfur Compound Emissions. The Permittee shall not cause or allow sulfur compound emissions, expressed as sulfur dioxide (SO_2), from an emission units listed in Table 1 to exceed 500 parts per million by volume (ppmv) averaged over three hours. Compliance with Condition 11 shall demonstrate compliance with Condition 9.

Section 6. Owner Requested Limits (ORLs) to Avoid Classification under PSD

10. To avoid classification as a Prevention of Significant Deterioration (PSD) major stationary source under 18 AAC 50.306 for oxides of nitrogen (NO_x) emissions, the Permittee shall limit the total NO_x emissions from EU42 through EU47 to less than 250 tons per 12-month rolling period. For EU42 through EU46:

10.1 Limit the combined hours of operation to no more than 2,400 hours per 12-month rolling period;

10.2 Install, maintain and operate a dedicated metering device on each emission unit to measure hours of operation;

10.3 At the end of each calendar month, record the monthly hours of operation for each emission unit;

10.4 At the end of each June and December, calculate the total hours of operation for the 12-month rolling period by combining the hours of operation of each emission unit during the month with the monthly hours of operation of all the emission units from the previous 11 months;

10.5 Report the monthly hours of operation for each emission unit, and the combined hours of operation of all the units for the preceding consecutive 11 calendar months in the Operating Report described under Condition 29 of Minor Permit AQ0486MSS01.

10.6 If the total hours of operation for the 12-month rolling period calculated in Condition 10.4 exceed 2,400 hours, submit an excess emission report to the Department as described under condition 28 of Minor Permit AQ0486MSS01.

Section 7. Fuel Sulfur Limits to Avoid Classification under 18 AAC 50.502(c)(3)(A)(ii)

11. To avoid classification under 18 AAC 50.502(c)(3) for SO_2 emissions, the Permittee shall limit the total SO_2 emissions from emission units listed in Table 1 to less than 10 tons per consecutive 12-month period as follows:

11.1 Burn only diesel fuel that complies with the applicable fuel sulfur requirements of 40 CFR 60 Subpart IIII in EU42 through EU46.

11.2 Burn only diesel fuel with a sulfur content not exceeding 0.05 percent by weight in EU39.

11.3 Monitor compliance with Conditions 11.1 and 11.2 by analyzing a representative sample of the fuel for each shipment to determine the sulfur content, measured in accordance with an appropriate methodology incorporated by reference within fuel specification standards ASTM D 396 92 or D 975 94, or an alternate method approved by the Department. Alternatively, the Permittee may keep a certified statement or receipt from the fuel supplier for each fuel shipment received that documents the fuel sulfur content.

11.4 The Permittee shall certify in each operating report described under Condition 29 of Minor Permit AQ0486MSS01 whether or not each shipment of diesel fuel burned in

a. EU42 through EU46 complies with Condition 11.1; and

b. EU39 complies with Condition 11.2.

11.5 The Permittee shall report as described under Condition 28 of Minor Permit AQ0486MSS01 if diesel fuel delivered to and burned in

a. EU42 through EU46 does not comply with Condition 11.1

b. EU39 contained more than 0.05 percent by weight sulfur.

Section 8. Standard Terms and Conditions

12. 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

12.1 an enforcement action; or

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

13. 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.

14. 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.

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

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

Section 9. Permit Documentation

August 6, 2010	Robert Honeycutt, Assistant Administrator of Support Services of PAMC submitted comments on the preliminary permit.
June 18, 2010	PAMC Consultant, Keith Quincey of Hoefler sends revised estimates for Emission Units 42 through 46 to the Department. The new estimates reflect not-to-exceed emission factors and 2,400 operation hours per year. The new estimates address the Department's concerns about project emissions.
June 14, 2010	Upon Department's request, PAMC Consultant, Keith Quincey from Hoefler Consultants, submitted additional emission unit characteristics of EU37 through EU41 to the Department by fax.
May 21, 2010	PAMC Consultant (Hoefler) sent a revised modeling analysis and memo to Krystin Bablinskas.
May 3, 2010	John Kuterbach, replied to PAMC's April 22 letter and described actions required to expedite actions on the permit.
April 26, 2010	The Department sent an email to applicant's consultant requesting explanations and clarifications relating to the air dispersion modeling for the project.
April 22, 2010	Micaela Jones, PAMC's Regional Director of Real Estate & Development sent a letter to John Kuterbach, Manager of Air Permits Program of the Department, requesting the Department to expedite issuance of the permit.
January 11, 2010	Consultant explains ACMP review is not applicable to project location.
January 11, 2010	Kwame Agyei, permit writer of the Department, contacts project consultant by phone to inquire about ACMP checklist.
December 17, 2009	Department receives Providence Health Systems-Washington application.

Section 10. Visible Emissions Forms

Visible Emissions Field Data Sheet

Certified Observer: _____

Company & Facility: _____

Location: _____

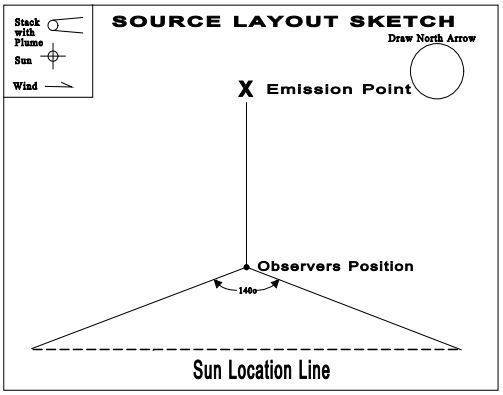
Test No.: _____ Date: _____

Source: _____

Production Rate/Operating Rate: _____

Unit Operating Hours: _____

Duration of Observation: _____



Clock Time	Initial				Final
Observer Location: Distance to discharge					
Direction from discharge					
Height of observer point					
Background Description:					
Weather Conditions: Wind direction					
Wind speed					
Ambient temperature					
Relative humidity					
Sky Conditions: (clear, overcast, % clouds, etc.)					
Plume Description: Color					
Distance Visible:					
Water Droplet Plume? (Attached or detached?)					
Other information:					

Visible Emissions Observation Record

Page ___ of ___

Company & Facility _____ Certified Observer_____

Test Number_____ Clock Time_____

Date:		Visibility reduction every 15 Seconds (Opacity)				Steam Plume (check if applicable)		Comments
Hr	Min	0	15	30	45	Attached	Detached	

Additional information:

_____ _____

Observer Signature and Date Certified By and Date

Data Reduction:

Duration of Observation Period (minutes) _____ Duration Required by Permit (minutes)_____

Number of Observations _____ Highest 6-Minute Average Opacity (%)_____

Number of Observations exceeding 20 % _____ In compliance with 6-minute limit? (Yes or No) _____

Average Opacity Summary:

Set Number	Time Start—End	Opacity	
		Sum	Average

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY OPERATING PERMIT

Permit No. AQ0486TVP03

Issue Date: Final - October 23, 2019
Expiration Date: October 23, 2024

The Alaska Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Providence Health System-Washington Inc.**, for the operation of the **Providence Alaska Medical Center**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As set out in AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

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

This operating permit becomes effective November 22, 2019.

Upon effective date of this permit, Operating Permit No. AQ0486TVP02 expires.

James R. Plosay, Manager
Air Permits Program

Table of Contents

Abbreviations and Acronyms

AAC ..... Alaska Administrative Code
ADEC ..... Alaska Department of Environmental Conservation
AS ..... Alaska Statutes
ASTM ..... American Society for Testing and Materials
BACT ..... best available control technology
bHp ..... brake horsepower
CAA or The Act ..... Clean Air Act
CDX ..... Central Data Exchange
CEDRI ..... Compliance and Emissions Data Reporting Interface
CFR ..... Code of Federal Regulations
CO ..... carbon monoxide
EPA ..... US Environmental Protection Agency
EU ..... emissions unit
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
kW ..... kilowatts
LAER ..... lowest achievable emission rate
MACT ..... maximum achievable control technology [as defined in 40 CFR 63]
MMBtu/hr ..... million British thermal units per hour
MR&R ..... monitoring, recordkeeping, and reporting
N/A ..... not applicable
NAICS ..... North American Industrial Classification System
NESHAP ..... National Emission Standards for Hazardous Air Pollutants [as contained in 40 CFR 61 and 63]
NH_3 ..... ammonia
NOx ..... nitrogen oxides
NSPS ..... New Source Performance Standards [as contained in 40 CFR 60]
O_2 ..... oxygen
PAL ..... plantwide applicability limitation
Pb ..... lead
$PM_{2.5}$ ..... particulate matter less than or equal to a nominal 2.5 microns in diameter
PM_{10} ..... particulate matter less than or equal to a nominal 10 microns in diameter
ppm ..... parts per million
ppmv, ppmvd ..... parts per million by volume on a dry basis
PSD ..... prevention of significant deterioration
PTE ..... potential to emit
SIC. ..... Standard Industrial Classification
SIP ..... State Implementation Plan
SO_2 ..... sulfur dioxide
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:		Providence Health System-Washington Inc. 506 Second Avenue, Suite 1200 Seattle, WA 98014-2329
Stationary Source Name:		Providence Alaska Medical Center
Location:		60º 11´ 19" North; 149º 49´ 03" West
Physical Address:		3200 Providence Drive Anchorage, AK 99519
Owner and Operator:		Providence Health System-Washington Inc. 506 Second Avenue, Suite 1200 Seattle, WA 98014-2329
Permittee's Responsible Official:		Robert Honeycutt, Chief Operating Officer 3200 Providence Drive P.O. Box 196604 Anchorage, AK 99519
Designated Agent:		Robert Honeycutt, Chief Operating Officer 3200 Providence Drive P.O. Box 196604 Anchorage, AK 99519
Stationary Source and Building Contact:		Richard Miller 3200 Providence Drive P.O. Box 196604 Anchorage, AK 99519 (907) 261-5000 richard.miller2@providence.org
Fee and Permit Contact:		Richard Miller 3200 Providence Drive P.O. Box 196604 Anchorage, AK 99519 (907) 261-5000 richard.miller2@providence.org
Process Description:	SIC Code	8062 - General Medical and Surgical Hospitals
	NAICS Code:	622110 - General Medical and Surgical Hospitals

[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 or Construction Date
1	SB-03	E. Keller Steam Boiler	Dual Fuel	38.5 MMBtu/hr	1974
2	SB-04	E. Keller Steam Boiler	Dual Fuel	38.5 MMBtu/hr	1974
3	SB-05	Nebraska Steam Boiler	Dual Fuel	49.0 MMBtu/hr	1999
4	SB-06	Cleaver Brooks Steam Boiler	Dual Fuel	42.2 MMBtu/hr	2000
17	G-201	Cummins Emergency Generator Engine	Diesel	300 kW	1990
22	G-301	Komatsu Emergency Generator Engine	Diesel	450 kW	1992
27	N/A	Distillate Storage Tank	N/A	19,800 gal	1992
28	B-1	Bryan MOB Hub Boiler 1	Natural Gas	12.6 MMBtu/hr	2006
29	B-2	Bryan MOB Hub Boiler 2	Natural Gas	12.6 MMBtu/hr	2006
30	G-1	Cummins Emergency Generator Engine	Diesel	680 hp	2005
35	API-3	Cummins PRB Emergency Generator Engine	Diesel	1,046 hp	2005
39	G-2	Cummins QSX15-G9 Tower S Emergency Generator Engine	Diesel	680 hp	2009
42	EPSS-1	CAT D3516C EPSS Generator 1	Diesel	2,937 hp	2011
43	EPSS-2	CAT D3516C EPSS Generator 2	Diesel	2,937 hp	2011
44	EPSS-3	CAT D3516C EPSS Generator 3	Diesel	2,937 hp	2011
45	EPSS-4	CAT D3516C EPSS Generator 4	Diesel	2,937 hp	2011
46	EPSS-5	CAT D3516C EPSS Generator 5	Diesel	2,937 hp	N/A
52	N/A	Weil McLain Boiler	Diesel	0.872 MMBtu/hr	2011
69	N/A	EPSS Diesel Storage Tank 1	N/A	45,000 gal	Unknown
70	N/A	EPSS Diesel Storage Tank 2	N/A	45,000 gal	Unknown

[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 1 through 4, 17, 22, 28 through 30, 35, 39, 42 through 46, and 52 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 22, 30, 35, 39, and 42 through 46, monitor, record, and report in accordance with Conditions 2 through 4.

1.2. For EU IDs 28 and 29, burn only gas as fuel. Monitoring for these emissions units shall consist of a statement in each operating report under Condition 70 indicating whether each of these emissions units burned only gas during the period covered by the report. Report under Condition 69 if any fuel other than gas is burned.

1.3. For EU ID 17, as long as the emissions unit does not exceed the limit in Condition 14, monitoring shall consist of an annual compliance certification under Condition 71 with the visible emissions standard.

1.4. For EU ID 52, monitoring shall consist of an annual compliance certification under Condition 71 with the visible emissions standard based on reasonable inquiry.

1.5. For EU IDs 1 through 4, use only gas as primary fuel. Monitoring for these emissions units shall consist of a statement in each operating report required in Condition 70 indicating whether each of these emissions units fired gas as the primary fuel during the period covered by the report. If operation on a back-up liquid fuel occurred during the period covered by the report, the Permittee shall monitor, record and report according to Condition 12.

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

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

Liquid Fuel-Fired Emissions Units (EU IDs 22, 30, 35, 39, and 42 through 46)

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 22, 30, 35, 39, and 42 through 46 for visible emissions using the Method 9 Plan under Condition 2.2.

2.1. The Permittee may for each unit elect to continue the visible emissions monitoring schedule 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)]

2.2. **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**.

(i) Except as provided in Condition 2.1 and Condition 2.2.a(iii), observe exhaust for 18 minutes within six months after the issue date of this permit.

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

(iii) Observe the exhaust of EU ID 46 within 90 days after startup.

[Condition 7.1a, Minor Permit AQ0486MSS02, 8/25/2010]

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 2.2.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 2.2.b, until the criteria in Condition 2.2.c for semiannual monitoring are met.

3. Visible Emissions Recordkeeping. When required by Condition 1.1, or in the event of replacement of any EU IDs 22, 30, 35, 39, and 42 through 46 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. When using the Method 9 Plan of Condition 2.2,

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.

4. Visible Emissions Reporting. When required by Condition 1.1, or in the event of replacement of any of EU IDs 22, 30, 35, 39, and 42 through 46 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 70:

a. 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.

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

4.2. Report under Condition 69:

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.

4.3. For the testing required under Condition 2.2.a(iii), submit the results of the surveillance records to the Department within 30 days of completing the source test.

[Condition 7.1b, Minor Permit AQ0486MSS02, 8/25/2010]

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 1 through 4, 17, 22, 28 through 30, 35, 39, 42 through 46, and 52 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 22, 30, 35, 39, and 42 through 46, monitor, record and report in accordance with Conditions 6 through 8.

5.2. For EU IDs 28 and 29, burn only gas as fuel. Monitoring for these emissions units shall consist of a statement in each operating report under Condition 70 indicating whether each of these emissions units fired only gas during the period covered by the report. Report under Condition 69 if any fuel other than gas is burned.

5.3. For EU ID 17, as long as the emissions unit does not exceed the limit in Condition 14, monitoring shall consist of an annual compliance certification under Condition 71 with the particulate matter standard.

5.4. For EU ID 52, monitoring shall consist of an annual compliance certification under Condition 71 with the particulate matter emissions standard based on reasonable inquiry.

5.5. For EU IDs 1 through 4, use gas as primary fuel. Monitoring for these emissions units shall consist of a statement in each operating report required in Condition 70 indicating whether each of these emissions units fired gas as the primary fuel during the period covered by the report. If operation on a back-up liquid fuel occurred during the period covered by the report, the Permittee shall monitor, record and report according to Condition 12.

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

Particulate Matter MR&R

Liquid Fuel-Fired Engines (EU IDs 22, 30, 35, 39, and 42 through 46)

6. Particulate Matter Monitoring. The Permittee shall conduct source tests on diesel engines, EU IDs 22, 30, 35, 39, and 42 through 46, 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 2.2 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 Recordkeeping. Within 180 calendar days of installation of the emissions unit, the Permittee shall record the exhaust stack diameter of EU ID 46. Report the stack diameter in the next operating report under Condition 70.

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

8. Particulate Matter Reporting. The Permittee shall report as follows:

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

8.1. Report under Condition 69:

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;

8.2. 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;

8.3. in each operating report under Condition 70, 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.

Liquid Fuel-Fired Boilers and Heaters (EU IDs 1 through 4)

9. Particulate Matter Monitoring. When required by Condition 12.2, the Permittee shall conduct source tests on EU IDs 1 through 4 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)]

9.1. Except as allowed under Condition 9.3, conduct a particulate matter source test according to the requirements set out in Section 6 no later than 90 calendar days after any time corrective maintenance fails to eliminate visible emissions greater than the 20 percent opacity threshold for two or more 18-minute observations in a consecutive six-month period.

9.2. 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 measured during each one-hour test run. Submit a copy of these observations with the source test report.

9.3. The particulate matter source test requirement in Condition 9.1 is waived for an emissions unit if:

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

b. take corrective action and conduct two 18-minute visible emissions observations in a consecutive six-month period to show that the excess visible emissions described in Condition 9.1 no longer occur.

10. Particulate Matter Recordkeeping. The Permittee shall keep records of the results of any particulate matter testing and visible emissions observations conducted under Condition 9.

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

11. Particulate Matter Reporting. The Permittee shall report as follows:

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

11.1. In each operating report required by Condition 70, include for the period covered by the report:

a. the dates, EU ID(s), and results when an 18-minute opacity observation was greater than the applicable threshold criterion in Condition 9.1.

b. a summary of the results of any particulate matter testing and visible emissions observations conducted under Condition 9.

11.2. Report as excess emissions, in accordance with Condition 69, any time the results of a source test for particulate matter exceed the particulate matter emission limit stated in Condition 5.

Dual Fuel-Fired Emissions Units (EU IDs 1 through 4)

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

12.1. For any of EU IDs 1 through 4 that does not exceed 400 hours of operations per calendar year on a back-up liquid fuel, monitoring of compliance for visible emissions and particulate matter standards shall consist of an annual certification under Condition 71.

12.2. For any of EU IDs 1 through 4, notify the Department and begin monitoring the affected emissions unit according to Condition 12.3 no later than 15 days after the end of a calendar month in which the cumulative hours of operation for the calendar year exceed any multiple of 400 hours on a back-up liquid fuel. If the observation exceeds the limit in Condition 1, monitor as described in Condition 9. If the observation does not exceed the limit in Condition 1, no additional monitoring is required until the cumulative hours of operation exceed each subsequent multiple of 400 hours on back-up liquid fuel during a calendar year[1].

12.3. When required to do so by Condition 12.2, observe the 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.

12.4. Keep records and report in accordance with Conditions 3, 4, 10, and 11.

12.5. Report under Condition 69 if the Permittee fails to comply with Conditions 12.2, 12.3 or 12.4.

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

Sulfur Compound Emissions Standard

13. Sulfur Compound Emissions. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from EU IDs 1 through 4, 17, 22, 28 through 30, 35, 39, 42 through 46, and 52 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)]

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

Sulfur Compound MR&R

Fuel Oil[2] (EU IDs 17, 22, 30, 35, 39, 42 through 46, 52, and 1 through 4 when operating on liquid fuel)

13.1. For EU IDs 17, 22, 30, 35, 52, and EU IDs 1 through 4 when operating on liquid fuel, the Permittee shall ensure compliance with Condition 13 by complying with Condition 17.1.

[Condition 5, Minor Permit AQ0486MSS01, 2/24/2006]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

a. Comply with the monitoring, recordkeeping, and reporting requirements in Conditions 17.3, 17.5, and 17.6.

[40 CFR 71.6(a)(3)]

13.2. For EU IDs 39 and 42 through 46, compliance with Condition 20 shall demonstrate compliance with Condition 13.

[Condition 9, Minor Permit AQ0486MSS02, 8/25/2010]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

a. Comply with the monitoring, recordkeeping, and reporting requirements in Conditions 20.3 through 20.5.

[40 CFR 71.6(a)(3)]

13.3. 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).

13.4. The Permittee shall report as follows:

a. If SO_2 emissions calculated under Condition 13.3 exceed 500 ppm, the Permittee shall report under Condition 69. When reporting under this condition, include the calculation under Section 12 or Method 19.

b. The Permittee shall include in the report required by Condition 70

(i) a list of the fuel grades received at the stationary source during the reporting period;

(ii) for any grade with a maximum fuel sulfur greater than 0.5 percent sulfur, the fuel sulfur of each shipment; and

(iii) 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)]

[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.

[40 CFR 71.6(a)(3)]

Fuel Gas (EU IDs 28, 29, and 1 through 4 while operating on fuel gas)

13.5. For EU IDs 28, 29, and EU IDs 1 through 4 while operating on fuel gas, ensure compliance with Condition 13 by complying with Condition 17.2.

[Condition 5, Minor Permit AQ0486MSS01, 2/24/2006]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

a. Comply with the monitoring, recordkeeping, and reporting requirements in Conditions 17.4 and 17.6.

[40 CFR 71.6(a)(3)]

Preconstruction Permit [3] Requirements

14. Emergency Generator Hourly Limits. Limit the operations of EU IDs 17, 22, and 30 to no more than 250 hours each in any 12 consecutive month period.

[Condition 6, Minor Permit AQ0486MSS01, 2/24/2006]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

14.1. Monitor and record the hours of operation for each occasion the engines operate.

14.2. Report using the operating report under Condition 70, the hours of operation for the twelve consecutive month period for the months covered in the operating report.

[Conditions 6.1 & 6.2, Minor Permit AQ0486MSS01, 2/24/2006]
[40 CFR 71.6(a)(3)]

14.3. Report in accordance with Condition 69 if a limit in Condition 14 is exceeded.

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

15. Boiler Distillate Oil Limits. Limit the combined distillate fuel oil burned in EU IDs 1 through 4 to no more than 500,000 gallons in any 12 consecutive month period.

[Condition 7, Minor Permit AQ0486MSS01, 2/24/2006]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

15.1. Monitor and record the combined monthly distillate oil burned in EU IDs 1 through 4. Measure the distillate oil burned using an inline meter or tank level-based meter system in the tank(s) dedicated to the boilers.

15.2. Calculate the 12 month rolling total combined distillate oil burned for each month as follows:

[Conditions 7.1 & 7.2, Minor Permit AQ0486MSS01, 2/24/2006]
[40 CFR 71.6(a)(3)]

[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.

a. Except as provided in Condition 15.2.b, before submitting each semiannual operating report required under Condition 70, calculate the combined distillate fuel burned for each 12 month period ending with a calendar month during the reporting period.

b. If the combined distillate fuel burned is greater than 250,000 gallons for any 12 consecutive month period, then for every subsequent 12 month period, calculate the total distillate fuel burned by the end of the month following that 12 month period.

[Conditions 7.2a & 7.2b, Minor Permit AQ0486MSS01, 2/24/2006]

15.3. Report using the operating report under Condition 70, the total distillate oil burned for each twelve consecutive month period ending during the time covered by the operating report.

[Condition 7.3, Minor Permit AQ0486MSS01, 2/24/2006]
[40 CFR 71.6(a)(3)]

15.4. Report in accordance with Condition 69 if the limit in Condition 15 is exceeded.

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

16. Boiler Natural Gas Limits. Limit the combined natural gas burned in EU IDs 1 through 4, 28, and 29 to no more than 1,000 million standard cubic feet in any 12 consecutive month period.

[Condition 8, Minor Permit AQ0486MSS01, 2/24/2006]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

16.1. Monitor and record the combined monthly natural gas burned in EU IDs 1 through 4, 28, and 29. Measure the natural gas burned using flow meters.

16.2. Calculate the 12 month rolling total combined natural gas burned for each month as follows:

[Conditions 8.1 & 8.2, Minor Permit AQ0486MSS01, 2/24/2006]
[40 CFR 71.6(a)(3)]

a. Except as provided in Condition 16.2.b, before submitting each semiannual operating report required under Condition 70, calculate the combined natural gas for each 12 month period ending with a calendar month during the reporting period.

b. If the combined natural gas burned is greater than 500,000 standard cubic feet in any 12 consecutive month period, then for every subsequent 12 month period, calculate the total natural gas burned by the end of the month following that 12 month period.

[Conditions 8.2a & 8.2b, Minor Permit AQ0486MSS01, 2/24/2006]

16.3. Report using the operating report under Condition 70, the total natural gas burned for each twelve consecutive month period ending during the time covered by the operating report.

[Condition 8.3, Minor Permit AQ0486MSS01, 2/24/2006]
[40 CFR 71.6(a)(3)]

16.4. Report in accordance with Condition 69 if the limit in Condition 16 is exceeded.

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

17. Sulfur Limits

[Condition 9, Minor Permit AQ0486MSS01, 2/24/2006]
[18 AAC 50.040(j) & 50.326(j)]

17.1. Limit the fuel sulfur content of the distillate fuel oil burned in the stationary source to no greater than 0.5 percent by weight by burning only No. 1 or No. 2 grade distillate oil.

17.2. Burn pipeline quality natural gas in the gas fired units. Pipeline quality gas means natural gas with total sulfur content not to exceed 12 grains per 100 standard cubic feet of gas.

17.3. For fuel oil, obtain a statement or receipt from the fuel supplier for each fuel shipment received that documents the fuel sulfur content or grade of fuel. If a statement or receipt is not available from the supplier, analyze a representative sample of the fuel after each shipment to determine the sulfur content using ASTM Method D 396-92 or D 975-94.

17.4. For natural gas fuel, state in each operating report whether or not all gas burned in the facility was gas received by pipeline.

17.5. Attach copies of the fuel sulfur content analyses, if required, to the operating report required by Condition 70.

17.6. Report as a permit deviation under Condition 69 whenever fuel combusted does not meet the requirements of Condition 17.1 or 17.2.

[Conditions 9.1 through 9.6, Minor Permit AQ0486MSS01, 2/24/2006]
[40 CFR 71.6(a)(1) & 71.6(a)(3)]

Ambient Air Quality Protection Requirements

18. To protect the annual average NO_2 ambient air quality standard, the Permittee shall:

[Condition 6, Minor Permit AQ0486MSS02, 8/25/2010]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

18.1. Stack Configuration:

a. Maintain the exhaust stack of EU ID 1 as a vertical release without a rain cap whenever EU ID 1 is operating. Exhaust stack of EU ID 1 may be covered when EU ID 1 is not operating.

[Condition 6.1a(ii), Minor Permit AQ0486MSS02, 8/25/2010]

b. For EU IDs 42 through 46

[Condition 6.1b, Minor Permit AQ0486MSS02, 8/25/2010]

(i) Install and maintain each exhaust stack as follows:

[Condition 6.1b(i), Minor Permit AQ0486MSS02, 8/25/2010]

(A) A release height that equals or exceeds

[Condition 6.1b(i)(A), Minor Permit AQ0486MSS02, 8/25/2010]

(1) 53 feet above grade;

(2) seven feet above the generator building roof; and

(3) two feet above the highest portion (penthouse) of the generator building.

[Conditions 6.1b(i)(A)(1) through 6.1b(i)(A)(3), Minor Permit AQ0486MSS02, 8/25/2010]

(B) Oriented at 60 degrees or more above the horizontal.

[Condition 6.1b(i)(B), Minor Permit AQ0486MSS02, 8/25/2010]

(ii) For EU ID 46, provide as-built drawings and photographs of the exhaust stack in the first operating report required under Condition 70 that would be due after installation of the exhaust stack.

[Condition 6.1b(ii), Minor Permit AQ0486MSS02, 8/25/2010]

18.2. Operational Limits:

a. Comply with the existing owner requested limits currently described in Conditions 14 through 17; and

b. Comply with Condition 19.

[Conditions 6.2a & 6.2b, Minor Permit AQ0486MSS02, 8/25/2010]

Owner Requested Limits (ORLs) to Avoid Classification under PSD

19. To avoid classification as a Prevention of Significant Deterioration (PSD) major stationary source under 18 AAC 50.306 for oxides of nitrogen (NOx) emissions, the Permittee shall limit the total NOx emissions from EU ID 42 through EU ID 46 to less than 250 tons per 12-month rolling period. For EU ID 42 through EU ID 46:

[Condition 10, Minor Permit AQ0486MSS02, 8/25/2010]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

19.1. Limit the combined hours of operation to no more than 2,400 hours per 12-month rolling period;

19.2. Install, maintain and operate a dedicated metering device on each emission unit to measure hours of operation;

19.3. At the end of each calendar month, record the monthly hours of operation for each emission unit;

19.4. At the end of each June and December, calculate the total hours of operation for the 12-month rolling period by combining the hours of operation of each emission unit during the month with the monthly hours of operation of all the emission units from the previous 11 months;

19.5. Report the monthly hours of operation for each emission unit, and the combined hours of operation of all the units for the preceding consecutive 11 calendar months in the operating report described under Condition 70.

19.6. If the total hours of operation for the 12-month rolling period calculated in Condition 19.4 exceed 2,400 hours, submit an excess emission report to the Department as described under Condition 69.

[Conditions 10.1 through 10.6, Minor Permit AQ0486MSS02, 8/25/2010]
[40 CFR 71.6(a)(1) & 71.6(a)(3)]

20. To avoid classification under 18 AAC 50.502(c)(3) for SO_2 emissions, the Permittee shall limit the total SO_2 emissions from EU IDs 39 and 42 through 46 to less than 10 tons per consecutive 12-month period as follows:

[Condition 11, Minor Permit AQ0486MSS02, 8/25/2010]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

20.1. Burn only diesel fuel that complies with the applicable fuel sulfur requirements of Condition 29.4 in EU IDs 42 through 46.

20.2. Burn only diesel fuel with a sulfur content not exceeding 0.05 percent by weight in EU ID 39.

20.3. Monitor compliance with Conditions 20.1 and 20.2 by analyzing a representative sample of the fuel for each shipment to determine the sulfur content, measured in accordance with an appropriate methodology incorporated by reference within fuel specification standards ASTM D 396 92 or D 975 94. Alternatively, the Permittee may keep a certified statement or receipt from the fuel supplier for each fuel shipment received that documents the fuel sulfur content.

20.4. The Permittee shall certify in each operating report described under Condition 70 whether or not each shipment of diesel fuel burned in

[Conditions 11.1 through 11.4, Minor Permit AQ0486MSS02, 8/25/2010]
[40 CFR 71.6(a)(1) & 71.6(a)(3)]

a. EU IDs 42 through 46 complies with Condition 20.1; and

b. EU ID 39 complies with Condition 20.2.

[Conditions 11.4a & 11.4b, Minor Permit AQ0486MSS02, 8/25/2010]

20.5. The Permittee shall report as described under Condition 69 if diesel fuel delivered to and burned in

[Condition 11.5, Minor Permit AQ0486MSS02, 8/25/2010]
[40 CFR 71.6(a)(3)]

a. EU IDs 42 through 46 does not comply with Condition 20.1.

b. EU ID 39 contained more than 0.05 percent by weight sulfur.

[Conditions 11.5a & 11.5b, Minor Permit AQ0486MSS02, 8/25/2010]

Insignificant Emissions Units

21. 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:

21.1. **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)]

21.2. **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)]

21.3. **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)]

21.4. General MR&R for Insignificant Emissions Units

a. The Permittee shall submit the compliance certifications of Condition 71 based on reasonable inquiry;

b. The Permittee shall comply with the requirements of Condition 52;

c. The Permittee shall report in the operating report required by Condition 70 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

40 CFR Part 60 New Source Performance Standards

Subpart A

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

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

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

[40 CFR 60.7(a)(1), Subpart A]

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

a. information describing the precise nature of the change,

b. present and proposed emission control systems,

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

d. the expected completion date of the change.

[40 CFR 60.7(a)(4), Subpart A]

22.3. A notification of the anticipated date for conducting the opacity observations required by 40 CFR 60.11(e)(1). The notifications shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.

[40 CFR 60.7(a)(6), Subpart A]

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

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

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

22.4. A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by 40 CFR 60.8 in lieu of Method 9 observation data as allowed by 40 CFR 60.11(e)(5). This notification shall be postmarked not less than 30 days prior to the date of the performance test.

[40 CFR 60.7(a)(7), Subpart A]

22.5. 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.

23. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements. Maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU IDs 3, 4, 28, and 29, any malfunction of the air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU IDs 3, 4, 28, and 29 is inoperative.

[18 AAC 50.040(a)(1)]
[40 CFR 60.7(b), Subpart A]

24. NSPS Subpart A Performance (Source) Tests. Conduct source tests according to Section 6 and as required in this condition on any affected facility.

[18 AAC 50.040(a)(1)]

24.1. Except as specified in paragraphs (a)(1),(a)(2), (a)(3), and (a)(4) of 40 CFR 60.8, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, or at such other times specified by 40 CFR Part 60, and at such other times as may be required by the Administrator, the Permittee shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

[40 CFR 60.8(a), Subpart A]

24.2. Tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors.

[40 CFR 60.8(b), Subpart A]

24.3. Tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

[40 CFR 60.8(c), Subpart A]

24.4. Provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the Permittee shall notify the Administrator as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator by mutual agreement.

[40 CFR 60.8(d), Subpart A]

24.5. Provide or cause to be provided, performance testing facilities as follows:

a. Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

b. Safe sampling platform(s),

c. Safe access to sampling platform(s), and

d. Utilities for sampling and testing equipment.

[40 CFR 60.8(e), Subpart A]

24.6. Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[40 CFR 60.8(f), Subpart A]

25. NSPS Subpart A Good Air Pollution Control Practice. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU IDs 3, 4, 28, and 29 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU IDs 3, 4, 28, and 29.

[18 AAC 50.040(a)(1)]
[40 CFR 60.11(d), Subpart A]

26. NSPS Subpart A Credible Evidence. For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Condition 28, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 3, 4, 28, and 29 would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.

[18 AAC 50.040(a)(1)]
[40 CFR 60.11(g), Subpart A]

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 Conditions 28 and 29. 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 Dc

28. NSPS Subpart Dc Applicability. For EU IDs 3, 4, 28, and 29, comply with the following applicable requirements of NSPS Subpart Dc.

[18 AAC 50.040(a)(2)(D), 50.040(j), & 50.326(j)]
[40 CFR 71.6(a)(1)]
[40 CFR 60.40c, Subpart Dc]

NSPS Subpart Dc Sulfur Dioxide and Particulate Matter Standards

28.1. For EU IDs 3 and 4, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur.

[40 CFR 71.6(a)(1)]
[40 CFR 60.42c(d), Subpart Dc]

28.2. Compliance with the fuel oil sulfur limits under Condition 28.1 may be determined based on a certification from the fuel supplier, as described under Condition 28.12, as applicable.

[40 CFR 71.6(a)(1)]
[40 CFR 60.42c(h), Subpart Dc]

28.3. The fuel oil sulfur limit in Condition 28.1 applies at all times, including periods of startup, shutdown, and malfunction.

[40 CFR 71.6(a)(1)]
[40 CFR 60.42c(i), Subpart Dc]

28.4. For EU IDs 3 and 4, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

28.5. The opacity standard under Condition 28.4 applies at all times, except during periods of startup, shutdown, or malfunction.

[40 CFR 71.6(a)(1)]
[40 CFR 60.43c(c) & 60.43c(d), Subpart Dc]

NSPS Subpart Dc Compliance and Performance Test Methods and Procedures

28.6. The owner or operator of an affected facility subject to the opacity standard under Condition 28.4 shall conduct performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods.

[40 CFR 71.6(a)(3)]
[40 CFR 60.45c(a), Subpart Dc]

a. Method 9 of appendix A-4 of 40 CFR 60 shall be used for determining the opacity of stack emissions.

[40 CFR 60.45c(a)(8), Subpart Dc]

NSPS Subpart Dc Emission Monitoring for Particulate Matter

28.7. The owner or operator of an affected facility shall comply with either Condition 28.7.a, 28.7.b, or 28.7.c. The observation period for Method 9 of appendix A-4 of 40 CFR 60 performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

[40 CFR 71.6(a)(3)]
[40 CFR 60.47c(a), Subpart Dc]

a. Except as provided in Conditions 28.7.b and 28.7.c, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of 40 CFR 60 performance tests using the procedures in Condition 28.7 according to the applicable schedule in Conditions 28.7.a(i) through 28.7.a(iv), as determined by the most recent Method 9 of appendix A-4 of 40 CFR 60 performance test results.

[40 CFR 60.47c(a)(1), Subpart Dc]

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of 40 CFR 60 performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of 40 CFR 60 performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of 40 CFR 60 performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of 40 CFR 60 performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

[40 CFR 60.47c(a)(1)(i) through (iv), Subpart Dc]

b. If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of 40 CFR 60 performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of 40 CFR 60 performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of 40 CFR 60 according to the procedures specified in Conditions 28.7.b(i) and 28.7.b(ii).

[40 CFR 60.47c(a)(2), Subpart Dc]

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of 40 CFR 60 and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (i.e., 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (i.e., 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (i.e., 90 seconds) or conduct a new Method 9 of appendix A-4 of 40 CFR 60 performance test using the procedures in Condition 28.7 within 45 calendar days according to the requirements in Condition 28.6.a.

(ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

[40 CFR 60.47c(a)(2)(i) & (ii), Subpart Dc]

c. If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of 40 CFR 60 performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in Condition 28.7.b. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

[40 CFR 60.47c(a)(3), Subpart Dc]

NSPS Subpart Dc Reporting and Recordkeeping Requirements

28.8. The owner or operator of each affected facility subject to the opacity limits of Condition 28.4 shall submit to the Administrator the performance test data from the initial and any subsequent performance tests.

[40 CFR 71.6(a)(3)]
[40 CFR 60.48c(b), Subpart Dc]

28.9. In addition to the applicable requirements in 40 CFR 60.7, the owner or operator of an affected facility subject to the opacity limits in Condition 28.4 shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in Conditions 28.9.a through 28.9.c, as applicable to the visible emissions monitoring method used.

[40 CFR 71.6(a)(3)]
[40 CFR 60.48c(c), Subpart Dc]

a. For each performance test conducted using Method 9 of appendix A-4 of 40 CFR 60, the owner or operator shall keep the records including the information specified in Conditions 28.9.a(i) through 28.9.a(iii).

[40 CFR 60.48c(c)(1), Subpart Dc]

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

[40 CFR 60.48c(c)(1)(i) through (iii), Subpart Dc]

b. For each performance test conducted using Method 22 of appendix A-4 of 40 CFR 60, the owner or operator shall keep the records including the information specified in Conditions 28.9.b(i) through 28.9.b(iv).

[40 CFR 60.48c(c)(2), Subpart Dc]

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

[40 CFR 60.48c(c)(2)(i) through (iv), Subpart Dc]

c. For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.

[40 CFR 60.48c(c)(3), Subpart Dc]

28.10. The owner or operator of each affected facility subject to the fuel oil sulfur limits under Condition 28.1 shall submit reports to the Administrator.

[40 CFR 71.6(a)(3)]
[40 CFR 60.48c(d), Subpart Dc]

28.11. The owner or operator of each affected facility subject to the fuel oil sulfur limits under Condition 28.1 shall keep records and submit reports as required under Condition 28.10, including the following information, as applicable.

[40 CFR 71.6(a)(3)]
[40 CFR 60.48c(e), Subpart Dc]

a. Calendar dates covered in the reporting period.

[40 CFR 60.48c(e)(1), Subpart Dc]

b. If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under Condition 28.12.a. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

[40 CFR 60.48c(e)(11), Subpart Dc]

28.12. Fuel supplier certification shall include the following information:

[40 CFR 71.6(a)(3)]
[40 CFR 60.48c(f), Subpart Dc]

a. For distillate oil:

[40 CFR 60.48c(f)(1), Subpart Dc]

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

[40 CFR 60.48c(f)(1)(i) through (iii), Subpart Dc]

28.13. For EU IDs 3, 4, 28, and 29, except as provided under Conditions 28.14 and 28.15, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

28.14. As an alternative to meeting the requirements of Condition 28.13, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in Condition 28.12 to demonstrate compliance with the SO_2 standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

28.15. As an alternative to meeting the requirements of Condition 28.13, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to NSPS Subpart Dc) at that property are natural gas, wood, distillate oil meeting the most current requirements in 40 CFR 60.42c to use fuel certification to demonstrate compliance with the SO_2 standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

[40 CFR 71.6(a)(3)]
[40 CFR 60.48c(g)(1) through (3), Subpart Dc]

28.16. The reporting period for the reports required under NSPS Subpart Dc is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[40 CFR 71.6(a)(3)]
[40 CFR 60.48c(j), Subpart Dc]

Subpart IIII

29. NSPS Subpart IIII Applicability. For EU IDs 39 and 42 through 46, comply with the following applicable requirements of NSPS Subpart IIII.

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

NSPS Subpart IIII Emission Standards

29.1. For EU IDs 42 through 46, comply with the following emission standards:

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

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

b. CO: 3.5 g/kW-hr

c. PM: 0.20 g/kW-hr

29.2. For EU ID 39, comply with the following emission standards:

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

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

b. CO: 3.5 g/kW-hr

c. PM: 0.20 g/kW-hr

29.3. Operate and maintain stationary CI ICE that achieve the emission standards as required in Conditions 29.1 and 29.2 over the entire life of the engine.

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

NSPS Subpart IIII Fuel Requirements

29.4. Owners and operators of stationary CI ICE that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

[40 CFR 71.6(a)(1)]
[40 CFR 60.4207(b), Subpart IIII]

NSPS Subpart IIII Compliance Requirements

29.5. You must do all of the following, except as permitted under Condition 29.7:

[40 CFR 71.6(a)(1)]
[40 CFR 60.42011(a), Subpart IIII]

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

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

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

[40 CFR 60.42011(a)(1) through (3), Subpart IIII]

29.6. You must comply with the emission standards in Conditions 29.1 and 29.2 by purchasing an engine certified to the emission standards in Conditions 29.1 and 29.2. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in Condition 29.7.

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

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

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

a. For EU ID 39, 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.

b. For EU IDs 42 through 46, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

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

NSPS Subpart IIII Testing Requirements

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

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

40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants

Subparts A & M

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

[18 AAC 50.040(b)(1) & (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

31. For EU ID 52, comply with the applicable requirements of 40 CFR 63 Subpart A in accordance with the provisions for applicability of Subpart A in Subpart JJJJJJ, Table 8.

[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]
[40 CFR 63.11235 & Table 8, Subpart JJJJJJ]

Subpart ZZZZ

32. **NESHAP Subpart ZZZZ Applicability**. For EU IDs 17, 22, 30, 35, 39, and 42 through 46, comply with the following applicable requirements of NESHAP Subpart ZZZZ.

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

32.1. For EU IDs 39 and 42 through 46, meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR part 60 Subpart IIII. No further requirements apply for such engines under 40 CFR 63.

[40 CFR 63.6590(c), Subpart ZZZZ]

32.2. For EU IDs 17, 22, 30, and 35, the emergency stationary RICE listed in Condition 32.2.a are not subject to NESHAP Subpart ZZZZ. The stationary RICE must meet the definition of an emergency stationary RICE in 40 CFR 63.6675, which includes operating according to the provisions specified in 40 CFR 63.6640(f).

[40 CFR 63.6585(f), Subpart ZZZZ]

a. Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate to supply power as part of a financial arrangement with another entity.

[40 CFR 63.6585(f)(3), Subpart ZZZZ]

Subpart JJJJJJ

33. **NESHAP Subpart JJJJJJ Applicability.** For EU IDs 1 through 4, 28, 29, and 52, comply with the following applicable requirements of NESHAP Subpart JJJJJJ.

[18 AAC 50.040(c)(39), 50.040(j), & 50.326(j)]
[40 CFR 71.6(a)(1)]
[40 CFR 63.11193 & 63.11194, Subpart JJJJJJ]

Subpart JJJJJJ Work Practice Standards and Management Practices

33.1. For EU ID 52, comply with the following:

[40 CFR 71.6(a)(1)]

a. Conduct a tune-up of the boiler every 5 years as specified in Condition 33.3.b.

[40 CFR 63.11201(b) & Table 2, Item 12; Subpart JJJJJJ]

Subpart JJJJJJ General Compliance Requirements

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 that 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 63.11205(a), Subpart JJJJJJ]

Subpart JJJJJJ Initial Compliance Requirements

33.2. For EU IDs 1 through 4, 28, 29, and 52, comply with the following:

a. For affected boilers that switch fuels or make a physical change to the boiler that results in the applicability of a different subcategory within Subpart JJJJJJ or the boiler becoming subject to Subpart JJJJJJ, you must demonstrate compliance within 180 days of the effective date of the fuel switch or the physical change. Notification of such changes must be submitted according to Condition 33.3.f.

[40 CFR 71.6(a)(3)]
[40 CFR 63.11210(i), Subpart JJJJJJ]

Subpart JJJJJJ Continuous Compliance Requirements

33.3. For EU ID 52, comply with the following:

a. For affected sources subject to the work practice standard or the management practices of a tune-up, you must conduct a performance tune-up according to Condition 33.3.b and keep records as required in Condition 33.3.d to demonstrate continuous compliance. You must conduct the tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.

b. You must conduct a tune-up of the boiler every 5 years to demonstrate continuous compliance as specified in Conditions 33.3.b(i) through 33.3.b(vii). Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up.

[40 CFR 71.6(a)(1) & (3)]
[40 CFR 63.11223(a) & (b), Subpart JJJJJJ]

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, not to exceed 72 months from the previous inspection).

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown, not to exceed 72 months from the previous inspection).

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available.

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

(vi) Maintain on-site and submit, if requested by the Administrator, a report containing the information in Conditions 33.3.b(vi)(A) through 0.

[40 CFR 63.11223(b)(1) through (6), Subpart JJJJJJ]

(A) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler.

(B) A description of any corrective actions taken as a part of the tune-up of the boiler.

[40 CFR 63.11223(b)(6)(i) & (ii), Subpart JJJJJJ]

(vii) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup.

[40 CFR 63.11223(b)(7), Subpart JJJJJJ]

Subpart JJJJJJ Notification, Reporting, and Recordkeeping Requirements

c. You must prepare, by March 1, and submit to the delegated authority upon request, a 5-year compliance certification report as specified in Conditions 33.3.c(i) and 33.3.c(ii). A report must be prepared in 2019 and every five years thereafter.

[40 CFR 71.6(a)(3)]
[40 CFR 63.11225(b), Subpart JJJJJJ]

(i) Company name and address.

(ii) Statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart. Your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

[40 CFR 63.11225(b)(1) & (2), Subpart JJJJJJ]

(A) "This facility complies with the requirements in §63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler."

(B) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit."

[40 CFR 63.11225(b)(2)(i) & (ii), Subpart JJJJJJ]

d. You must maintain the records specified in Conditions 33.3.d(i) through 33.3.d(iv).

[40 CFR 71.6(a)(3)]
[40 CFR 63.11225(c), Subpart JJJJJJ]

(i) As required in 40 CFR 63.10(b)(2)(xiv), you must keep a copy of each notification and report that you submitted to comply with NESHAP Subpart JJJJJJ and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.

(ii) You must keep records to document conformance with the work practices and management practices required by Condition 33.3.b as specified in Condition 33.3.d(ii)(A).

[40 CFR 63.11225(c)(1) & (2), Subpart JJJJJJ]

(A) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.

[40 CFR 63.11225(c)(2)(i), Subpart JJJJJJ]

(iii) Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment.

(iv) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in Condition 33.1.b, including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation.

[40 CFR 63.11225(c)(4) & (5), Subpart JJJJJJ]

e. Your records must be in a form suitable and readily available for expeditious review. You must keep each record for 5 years following the date of each recorded action. You must keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. You may keep the records off site for the remaining 3 years.

[40 CFR 71.6(a)(3)]
[40 CFR 63.11225(d), Subpart JJJJJJ]

f. If you have switched fuels or made a physical change to the boiler and the fuel switch or change resulted in the applicability of a different subcategory within this subpart, in the boiler becoming subject to this subpart, or in the boiler switching out of this subpart due to a fuel change that results in the boiler meeting the definition of gas-fired boiler, as defined in 40 CFR 63.11237, or you have taken a permit limit that resulted in you becoming subject to this subpart or no longer being subject to this subpart, you must provide notice of the date upon which you switched fuels, made the physical change, or took a permit limit within 30 days of the change. The notification must identify:

[40 CFR 71.6(a)(3)]
[40 CFR 63.11225(g), Subpart JJJJJJ]

(i) The name of the owner or operator of the affected source, the location of the source, the boiler(s) that have switched fuels, were physically changed, or took a permit limit, and the date of the notice.

(ii) The date upon which the fuel switch, physical change, or permit limit occurred.

[40 CFR 63.11225(g)(1) & (2), Subpart JJJJJJ]

40 CFR Part 82 Protection of Stratospheric Ozone

Subparts F, G, & H

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

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

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

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

36. Subpart H – Halons Emissions Reduction. Comply with the applicable prohibitions in 40 CFR 82.270.

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

General NSPS and NESHAP Requirements

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

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

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

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

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

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

39. After the effective date of any relevant standard promulgated by the Administrator under 40 CFR 63, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator and the Department of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in 40 CFR 63.9(b).

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

40. **Reports.** Except for previously submitted reports and federal reports and notices submitted through EPA's Central Data Exchange (CDX) and Compliance and Emissions Data Reporting Interface (CEDRI) online reporting system, attach to the operating report required by Condition 70 for the period covered by the report, a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10. For reports previously submitted to ADEC or submitted through CDX/CEDRI, state in the operating report the date and a brief description of each of the reports submitted during the reporting period.

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

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

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

Section 5. General Conditions

Standard Terms and Conditions

42. 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)]

43. 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)]

44. 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)]

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

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

46. **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

46.1. the stationary source's assessable potential to emit of 234 tpy; or

46.2. 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)]

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

47.1. 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

47.2. 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 46.1.

[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)]

48. Good Air Pollution Control Practice. The Permittee shall do the following for EU IDs 1, 2, 17, 22, 27, 30, 35, 69, and 70:

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

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

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

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

49. 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)]

50. 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)]

50.1. 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 50.1.a or to address the results of Department inspections that found potential problems; and

(ii) to prevent future dust problems.

50.2. The Permittee shall report according to Condition 52.

51. 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)]

52. 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)]

52.1. Monitoring, Recordkeeping, and Reporting for Condition 52:

a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 69.

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 52.

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 52; or

(ii) the Department notifies the Permittee that it has found a violation of Condition 52.

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 52; 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 70, 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.

53. Technology-Based Emission Standard. If an unavoidable emergency, malfunction (as defined in 18 AAC 50.235(d)), or non-routine repair (as defined in 18 AAC 50.990(64)), causes emissions in excess of a technology-based emission standard[7] listed in Condition 28, 29, or 34 (refrigerants)>,

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

53.2. report in accordance with Condition 69; 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

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

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

54.2. Include this condition in the annual certification required under Condition 71.

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

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

Section 6. General Source Testing and Monitoring Requirements

55. 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)]

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

[18 AAC 50.220(b)]

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

56.2. 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.

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

57.1. 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]

57.2. 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]

57.3. 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]

57.4. 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)]

57.5. 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]

57.6. 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]

57.7. 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]

58. 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)]

59. Test Exemption. Compliance with Conditions 61, 62 and 63 is not required for Method 9 Plan (Condition 2.2) observations.

[18 AAC 50.345(a)]

60. 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)]

61. Test Plans. Except as provided in Condition 59, 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 55 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)]

62. Test Notification. Except as provided in Condition 59, 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)]

63. Test Reports. Except as provided in Condition 59, 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 66. 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)]

64. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in Conditions 5 and 21.2, 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

65. 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)]

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

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

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

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

c. the date(s) analyses were performed;

d. the company or entity that performed the analyses;

e. the analytical techniques or methods used;

f. the results of such analyses; and,

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

Reporting Requirements

66. Certification. 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.

66.1. 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 66.1.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)]

67. Submittals. Unless otherwise directed by the Department or this permit, 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. Submit the documents either by hard copy or electronically.

67.1. Provide electronic submittals, either by:

a. email 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)]

68. 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)]

69. Excess Emissions and Permit Deviation Reports.

69.1. Except as provided in Condition 52, 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 69.1.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 69.1.c(i); and

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

69.2. 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.

69.3. 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)]

70. Operating Reports. During the life of this permit[8], 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.

70.1. 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.

70.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 70.1, 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

70.3. when excess emissions or permit deviations have already been reported under Condition 69 the Permittee shall cite the date or dates of those reports.

70.4. The operating report must include, for the period covered by the report, a listing of emissions monitored under Conditions 2.2.e 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

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

d. the monitoring result which triggered the additional monitoring.

70.5. **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)]

71. Annual Compliance Certification. Each year by March 31, compile and submit to the Department an annual compliance certification report according to Condition 67.

71.1. 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;

71.2. **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.

71.3. In addition, submit a copy of the report directly to the Clean Air Act Compliance Manager, US EPA Region 10, Mail Stop: OCE-101, 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)]

72. 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:

72.1. 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, NOx or SO_2.

72.2. 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}, $PM_{2.5}$, NOx or VOCs.

72.3. For reporting under Condition 72.2, 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.

72.4. 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

73. Permit Applications and Submittals. Comply with the following requirements for submitting application information to the US Environmental Protection Agency (EPA):

73.1. 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;

73.2. The information shall be submitted to the Part 70 Operating Permit Program, US EPA Region 10, Mail Stop: OAW-150, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101.

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

73.4. 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)]

74. 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)]

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

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

75.2. 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;

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

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

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

76. Operational Flexibility. CAA Section 502(b)(10)[9] changes may be made within the permitted stationary source without a permit revision, if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions): Provided, that the Permittee provides EPA and the Department with written notification no less than seven days in advance of the proposed change.

76.1. For each such change, the notification required by Condition 76 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.

76.2. The permit shield described in 40 CFR 71.6(f) shall not apply to any change made pursuant to Condition 76.

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

77. Permit Renewal. To renew this permit, the Permittee shall submit to the Department[10] an application under 18 AAC 50.326 no sooner than April 23, 2023 and no later than April 23, 2024. The renewal application must be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 CFR 71.7(b) and 71.5(a)(1)(iii).

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

[9] 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.

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

Section 9. Compliance Requirements

General Compliance Requirements

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

78.1. included and specifically identified in the permit; or

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

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

79. 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

79.1. an enforcement action;

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

79.3. denial of an operating permit renewal application.

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

80. 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)]

81. 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)]

82. 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

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

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

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

82.4. 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)]

83. 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.

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

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

84.2. 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)]

85. Table B identifies the emissions units that are not subject to the specified requirements at the time of permit issuance. If any of the requirements listed in Table B becomes applicable during the permit term, 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 B - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
1 through 4	40 CFR 63 Subpart JJJJJJ	These units are exempt from Subpart JJJJJJ because they only fire natural gas, or fire diesel no more than 48 hours per year.
28 & 29	40 CFR 63 Subpart JJJJJJ	These units are exempt from Subpart JJJJJJ because they only fire natural gas.
3 & 4	40 CFR 60 Subpart Dc §§60.42c(a) through (c), and §§60.43c(a) and (b)	These units do not burn coal or wood.
17, 22, 30, 35	40 CFR 60 Subpart IIII	This engine is an emergency, non-fire pump emission unit that has not been manufactured after April 1, 2006 and has not been modified or reconstructed after July 11, 2005, per §60.4200(a)(2).
39	40 CFR 60 Subpart IIII §60.4204	Affected unit is an emergency engine.
39	40 CFR 60 Subpart IIII §60.4209(a)	Not an affected unit because the engine is certified to meet non-emergency engine emission standards.
42 through 46	40 CFR 60 Subpart IIII §60.4205	Affected units are non-emergency engines.
27	40 CFR 60 Subpart Kb	The storage tank capacity is less than 75 m^3.
69 & 70	40 CFR 60 Subpart Kb	These tanks have a capacity greater than 151 m3 and store a liquid with a maximum true vapor pressure less than 3.5 kPa.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
Stationary Source-wide	40 CFR 63 Subpart DDDD	The stationary source is not a major source of hazardous air pollutants.
Stationary source-wide	40 CFR 63 Subpart WWWWW	The stationary source does not have an ethylene oxide sterilization unit.
Mobile internal combustion engines	18 AAC 50.055	Mobile internal combustion engines are not "industrial processes" or "fuel burning equipment" as defined in 18 AAC 50.990.

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

Section 11. Visible Emissions Observation Form

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

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

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

Page No.____________

Stationary Source Name	Type of Emission Unit	
Emission Unit Location		
City	State	Zip
Phone # (Key Contact)	Stationary Source ID Number	
Process Equipment	Operating Mode	
Control Equipment	Operating Mode	
Describe Emission Point/Location		
Height above ground level	Height relative to observer	Clinometer Reading
Distance From Observer Start End	Direction From Observer Start End	
Describe Emissions & Color Start	End	
Visible Water Vapor Present? If yes, determine approximate distance from the stack exit to where the plume was read No Yes		
Point in Plume at Which Opacity Was Determined		
Describe Plume Background Start End	Background Color Start End	
Sky Conditions: Start	End	
Wind Speed Start End	Wind Direction From Start End	
Ambient Temperature	Wet Bulb Temp	RH percent

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

Observation Date		Start Time		End Time

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

Range of Opacity
Minimum Maximum

I have received a copy of these opacity observations		Print Observer's Name	
Print Name:		Observer's Signature	Date
Signature:			Observer's Affiliation:
Title	Date	Certifying Organization Certified By:	Date

Data Reduction:

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

Average Opacity Summary:

Set Number	Time			Opacity		Comments
	Start	End		Sum	Average	

Section 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 13.1. 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[11]

Providence Alaska Medical Center — **Stationary Source (Facility) Name**

AQ0486TVP03 — **Air Quality Permit Number.**

Providence Health System-Washington Inc. — **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.

[11] Revised as of September 27, 2010.

(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

(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. Fax to: 907-451-2187

   Or

2. Email to: DEC.AQ.Airreports@alaska.gov

   Or

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

   Or

4. Phone Notifications: 907-451-5173

   Phone notifications require a written follow-up report.

   Or

5. 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.

[18 AAC 50.346(b)(3)]

Section 14. Emission Inventory Form

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 & Address & contact number	**Owner Name:**	
	Owner Address:	
	Phone Number:	
Mailing Contact Information	**Mailing Address:**	
Line of Business (NAICS)		
Line of Business (SIC)		
Facility Status:		

Emissions Unit Data			
Specifications			
ID		**Design Capacity**	
Description			
Emissions 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	**Primary Process**
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)	EF Numerator	EF Denominator	EF Source	Tons
Carbon Monoxide (CO)					
Nitrogen Oxides NOx					
PM_{10} Primary (PM_{10}-PRI)					
$PM_{2.5}$ Primary (PM_{25}-PRI)					
Sulfur Dioxide (SO_2)					
Ammonia (NH_3)					
Lead and lead compounds					
Volatile Organic Compounds (VOC)					

Emissions' Release Point

Release Point ID					
Apportion%					

Process	**Secondary Process**
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)	EF Numerator	EF Denominator	EF Source	Tons
Carbon Monoxide (CO)					
Nitrogen Oxides NOx					
PM_{10} Primary (PM_{10}-PRI)					
$PM_{2.5}$ Primary (PM_{25}-PRI)					
Sulfur Dioxide (SO_2)					
Ammonia (NH_3)					
Lead and lead compounds					
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)*

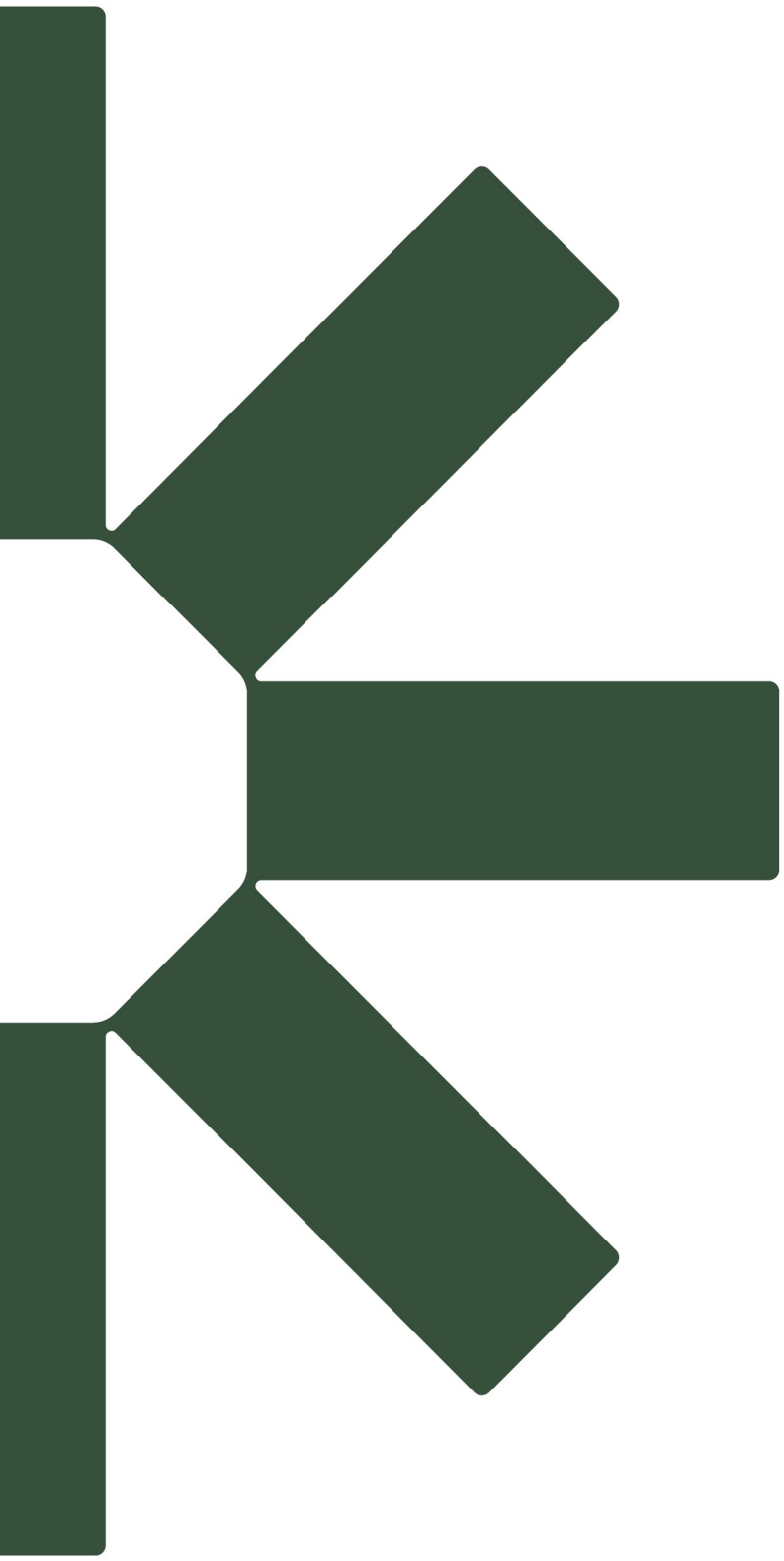
To submit this report:

1. Fax this form to: 907-465-5129; or
2. E-mail to: DEC.AQ.airreports@alaska.gov; or
3. Mail to: ADEC
   Air Permits Program
   410 Willoughby Ave., Suite 303
   PO Box 111800
   Juneau, AK 99811-1800

Or

4. Direct data entry for emission inventory can be done through the Air Online System (AOS). A myAlaska account is needed to gain access and a profile needs to be set up in Permittee Portal.
   http://dec.alaska.gov/Applications/Air/airtoolsweb/.

[18 AAC 50.346(b)(9)]



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